

HAWAIIAN DEMOGRAPHIC DATA: 'EHIA KĀNAKA MAOLI?*

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FOREWORD

This study was generated in response to H.C.R. No. 156, S.D. 1 (1998). The concurrent resolution asked the Legislative Reference Bureau to study issues relating to collection and reporting of data on Hawaiians. The study involves a review of current and past data sources as well as suggestions for the future collection of Hawaiian demographic data.

The Bureau wishes to extend its appreciation to all those who assisted in this study, especially Bella Zi Bell, Mark Eshima, Ernest Kimoto, Jalna Keala, Jan Nakamoto, Dr. Alvin Onaka, Brian Horiuchi, Dr. Pua Aiu, Dr. David Johnson, Neal Oyama, Tim Wong, Mele A. Look, Ormond Hammond, Bob Freitas, Chris Melahn, Jim Cooper, JoAnn Tsark, the Cancer Research Center of Hawaii, and Mariann Teshima. Without the dedication of these and other demographers and researchers who produce Hawaiian demographic data, this report could not have been produced.

Wendell K. Kimura
Acting Director

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Chapter 1

BACKGROUND

Nature of the Study

During the Regular Session of 1998, the Legislature adopted House Concurrent Resolution No. 156, S.D. 1, entitled Requesting the Legislative Reference Bureau to Identify, Compile, and Summarize Available Demographic Data on Native Hawaiians. A copy of the resolution is contained in Appendix A.

Objective of the Study

The resolution requested the Legislative Reference Bureau (Bureau) to identify, compile, evaluate, and summarize available demographic data on native Hawaiians, including but not limited to total population, residence both within Hawai'i and elsewhere, and distribution by age, gender, blood quantum, education, and income. The resolution also specified certain data sources for the Bureau to examine, requested the Bureau to survey how other agencies acquire demographic data, and provided that if entities refused to release information, the Bureau was to evaluate these claims and recommend legislative action necessary to removing barriers to the information. No entity to which the Bureau spoke refused to release information, so this last issue was not a concern.

One issue arose that needs to be emphasized: nothing in this study is meant to classify, or should be interpreted as classifying, who should be or is a Hawaiian. The purpose of this study is to assist the State to meet its planning needs by collecting demographic data on Hawaiians. As is described in later chapters, two primary methods are self-identification and genetic heritage. Any preference in the study as to which the State should use for planning purposes is limited to that use alone, and not as setting a standard for individual or group identification as Hawaiian.

Organization of the Study

The study is organized into five chapters. This introduction is the first chapter. Chapter 2 takes a historical look at Hawaiian demographic data collection in the State. Chapter 3 looks at specific sources of demographic data, and examines some of the problems in collecting and cross-referencing the data. Chapter 4 looks at the future of Hawaiian demographic data collection. Chapter 5 contains the findings, recommendations, and conclusions.

Chapter 2

ISSUES SURROUNDING CURRENT HAWAIIAN DEMOGRAPHIC DATA COLLECTION

Census and health surveys incorporating racial data have not followed a consistent pattern of definitions, and this has resulted in a lack of comparability of data.¹

House Concurrent Resolution No. 156, S.D. 1, requests the Legislative Reference Bureau to identify, compile, evaluate, and summarize available demographic data on Native Hawaiians, including but not limited to total population, residence both within Hawaii and elsewhere, distribution by age, gender, blood quantum, education, and income. The resolution notes that existing demographic data appears to be incomplete and outdated and that there is a pressing need to develop current and projected demographic data on Native Hawaiians for use and reference in making informed decisions on Native Hawaiian programs and issues.

It should be noted that the resolution does not ask for, and this report does not provide, a definition of who is Hawaiian. This report merely looks at ways that demographers have collected data on Hawaiians and evaluates their definitions for consistency and usefulness to the state planning process. It does not provide guidelines to exclude or include anyone from asserting his or her Hawaiian identity, and should not be read as such.

Complexity of Hawaiian Demographic Data Collection and Reporting in Hawai'i

The resolution assumes that the Hawaiian demographic data already exist and that this study is merely an exercise in data collection and reporting. However, an in-depth analysis of the existing Hawaiian demographic data reveals that the task is much more complicated than that. Noted state statistician Robert Schmitt, author of numerous articles on Hawai'i demographics, has stated that Calculating accurate demographic data and social rates for Hawaiians and part-Hawaiians is becoming progressively more difficult and perhaps impossible [p]recision in comparative birth, death, crime, unemployment, poverty, and similar rates is an unattainable goal, particularly for Hawaiians.² The rest of this report will highlight the issues and problems in Hawaiian demographic data collection, and suggest methods of improved data collection in the future.

The foremost difficulty in Hawaiian demographic data is that there is no one consistent standard for determining who is to be classified as Hawaiian. Both public

and private agencies and researchers use different methods for determining whom they classify as Hawaiian. A description from the Native Hawaiian Data Book³ of seventeen state and one federal agency classifications illustrates this problem.

State and Federal Agencies: Classification of Hawaiians

Department of Education (DOE)

The DOE uses two different methods to calculate who is Hawaiian. For students, race is indicated by the parents on the student's enrollment form. Only one identity can be chosen, and the categories include Hawaiian and Part-Hawaiian. For DOE employees, race is indicated by the employee. Only one identity can be chosen, and there is only one Hawaiian category (no part-Hawaiian category).

Department of Hawaiian Home Lands

Pursuant to the Hawaiian Homes Commission Act, 1920, the term native Hawaiian (note that native is not capitalized) means any descendant of not less than one-half of the blood of the races inhabiting the Hawaiian Islands previous to 1778.⁴

Department of Health (DOH)

The DOH runs a number of programs, which differ in their treatment of race and ethnic background.

Hawaii Health Survey (formerly the *Health Surveillance Program*). The Health Survey program collects information on certain health categories, such as hypertension and cholesterol, for all state residents. The Health Survey was called the Health Surveillance Program until 1996: it will be referred to in this study as the Health Survey when post-1995 data is meant, HSP when pre-1995 data is meant, and HSP/Health Survey when the continuing survey program is meant. The program records the person's parents' ethnicities and codes the first two as that parent's ethnic classification. If a parent has more than two ethnicities, generally only the first two are coded (it is assumed that the person lists his or her parents' ethnicities in order of predominance), except if the parent is part-Hawaiian. The Hawaiian identity is recorded as the second code, no matter where it is listed in the parent's list. The person's own ethnic identity is a composite of his or her parents. Two examples: If a person has a father reported as Chinese and a mother reported as Japanese/Caucasian, the person's father is coded as Chinese-Chinese and the person's mother is coded as Japanese-Caucasian. The person is coded as Chinese-Chinese-Japanese-Caucasian. If a person has a father who is reported as Black/Caucasian/Filipino and a mother who is reported as Caucasian/Chinese/Hawaiian, the father is coded as Black-Caucasian

and the mother as Caucasian-Hawaiian (the Hawaiian identity displaces the second-listed Chinese identity, having the incidental effect of masking this particular person's Asian heritage as the Filipino/Chinese portions of both parents is dropped). The person will be coded as Black-Caucasian-Caucasian-Hawaiian. While these data remain in the statistics, the person's ethnic identity is coded as only one ethnicity, based on the standards listed below, which give deference to Hawaiian blood.

Office of Health Status Monitoring. This office handles vital statistics, which have been tracked in Hawai'i since 1896.⁵ Historically, as Hawai'i's population became more multi-racial, the Bureau of Vital Statistics began to break down ethnicities into smaller and smaller categories. In the early part of this century, for instance, people could be categorized not merely as part-Hawaiian, but as Caucasian-Hawaiian or Asiatic-Hawaiian.⁶ According to one source, one agency listed 169 different racial groups, including groups such as Portuguese-Caucasian-Negro-Puerto Rican and Chinese-Hawaiian-Japanese-Norwegian.⁷ A review of birth records between 1948 and 1958 revealed 524 different ethnic combinations.⁸

This multiplicity of ethnic identities contrasted sharply with census data. The Hawaiian government had collected census data beginning in 1850 at six year intervals, and had obtained data for the numerous ethnic groups and mixtures important to the islands.⁹ Upon annexation, the United State Census took over that function, and it frequently forced island populations into mainland classificatory schemes of questionable local value.¹⁰

To forestall dealing with a multiplicity of ethnic identities, the Territorial Bureau of Vital Statistics and the Census adopted a standard for classification of multi-ethnic people focussed on limiting identity options:¹¹

- a. If Hawaiian is one of the multiple ethnicities listed, part-Hawaiian is coded;
- b. If a Caucasian and a non-Caucasian ethnicity are listed, the non-Caucasian identity is coded;
- c. If more than one non-Caucasian ethnicity is listed, the first one is coded; and
- d. If there is more than one Caucasian ethnicity listed, the first one is coded.

Today, vital statistics information is derived from information presented on the Birth, Death, and Marriage certificates. Each of these is derived differently. While a number of ethnicities for each person can be recorded, each person is then coded with a single ethnic identifier according to the standard set forth above.

1. *Birth certificates.* The parents' ethnic identities are recorded on the certificate, and the DOH determines a child's ethnic identity from that data as follows:

- a. If the parents are the same race, the child is that race;
- b. If either parent is Hawaiian or part-Hawaiian, the child is Hawaiian;
- c. If either parent is Black, the child is Black (unless the child is also Hawaiian, in which case the Hawaiian ethnicity will be recorded);
- d. If one parents is Caucasian and the other not, the child will be the race of the non-Caucasian parent;
- e. If the parents are both Caucasian but not the same sub-group; or both non-Caucasian, the child s race will be that of the father.

2. *Death certificates.* Information is provided by next-of-kin, family, or health care professionals. Multiple races can be listed.

3. *Marriage certificates.* The bride and groom self-report their identities on the marriage certificate. Multiple racial identifiers can be used. Note that there is an inconsistency in how data is recorded for people of Portuguese ancestry: they are recorded as such for birth and death certificates, but for marriages they are combined with Caucasian.

Only one actual identity is coded even if multiple ethnic identities are listed.

AIDS Surveillance Program. The locally-developed form lists Hawaiian/part-Hawaiian as a single category, and race information is obtained (1) from the patient, (2) from the patient s medical record, or (3) by visual observation.

Behavioral Risk Factor Survey. The respondent self-identifies his or her race for a list of racial categories. Hawaiian/Part-Hawaiian is listed as one category.

Diabetes Control Program. Race is determined through single-category self-identification.

Cardiovascular Disease Prevention and Control Program Race is determined through a single-category self-identification. Hawaiian is a listed category, but not Part-Hawaiian.

Department of Human Services (DHS)

DHS has four situations in which data is collected on ethnicity:

Entitlement Programs. Persons receiving Aid to Families with Dependent children (AFDC, now Temporary Assistance to Families), Aid to the Aged, Blind, and Disabled (ABD), General Assistance, Food Stamps, and Medicaid indicate their race through a single-category check list. There is a Hawaiian, but not a part-Hawaiian, category.

Child Abuse and Neglect. DHS records data on child abuse and neglect in its Child Protective Services System. Data is taken from reports that come in for the caretakers and the child. It is unclear how that data is determined. The category Hawaiian includes part-Hawaiians.

Hawaii Housing Authority (HHA)

Applicants and residents in HHA public housing list their race through a single-category check-off list. Hawaiian is listed as a category, but not part-Hawaiian.

Office of Youth Services. The race of juvenile offenders is determined by self-identification. Hawaiian-Part-Hawaiian is a single category.

Department of Labor and Industrial Relations

Employment/unemployment data is derived from the U.S. Census Bureau (which uses the single-category self-identification method).

The **Employment Service Office** uses a self-identification single category checklist.

Unemployment insurance recipients have their racial identification reported by the unemployment insurance claims taker, based on visual observation or the claimant's last name.

Department of the Attorney General

Crime Prevention Division The Department of the Attorney General compiles racial data of two types.

1. **Crime victims.** The Attorney General conducts the Survey of Crime and Justice in Hawaii, which is sent to a random sampling of the population. The respondents are asked their racial/ethnic identity from a list of ten single categories, including Hawaiian/Part-Hawaiian.

2. **People who have been arrested.** The Attorney General also compiles data on persons arrested based on police reports from all four counties. The arrest reports

are prepared by the arresting officer, who bases data on race on information from the arrestee, visual observation, or the arrestee's last name. The Native Hawaiian Data Book notes that [t]here is no standardization for racial/ethnic identification among the police departments or within each police department.¹²

Department of Public Safety (PSD)

The PSD collects racial data on persons admitted to facilities under its control. Ethnic identity is based on self-identification of up to three ethnic identities, but that data is then collapsed into a single category out of ten for reporting purposes. Persons of mixed identity who report any Hawaiian identity are coded as Hawaiian. Persons with any other type of mixed identity are coded as Other and Mixed.

Department of Business Economic Development and Tourism (DBEDT)

DBEDT, which produces *The State of Hawaii Data Book*, does no primary research and relies on information from the Census and the Department of Health.¹³

Office of Hawaiian Affairs (OHA)

OHA serves two different populations of Hawaiians, due to its sources of funding. The moneys it received from the ceded land revenues are slated to serve Hawaiians of fifty percent or more Hawaiian blood. OHA refers to these people as native Hawaiians (note the lower case n). The moneys that it receives from the State can be used for anyone with any Hawaiian blood, and OHA uses the terms Hawaiian or Native Hawaiian (note the upper case N) for that larger category of Hawaiians.¹⁴ In this study, as stated in chapter 1, the term Hawaiian will be used to mean anyone with any quantity of Hawaiian blood, unless the context -- such as comparing persons with Hawaiian and part-Hawaiian heritage -- indicates otherwise.

United States Bureau of the Census

The Census, as it was conducted last in 1990, asks respondents to indicate a single race from a list of races. The Census acknowledges that the category reflects self-identification; it does not denote any clear-cut scientific definition of biological stock.¹⁵ The 2000 Census is expected to differ in significant ways, which will be discussed in the next chapter. This chapter will discuss the Census as it has collected data in the past to give the Legislature an understanding of how that data, which is frequently cited, should be handled.

Evaluation of Existing Data

As is demonstrated above, governmental entities -- even within the same division -- are not using standard definitions to classify who is Hawaiian. Some of these differences may not change the results significantly, but some methods are so disparate that comparing data between the two is highly misleading. The most marked dichotomy in data collection is illustrated by examining the Department of Health's Hawaii Health Survey, widely used by government and the private sector, and the U.S. Census, also frequently referred to for demographic data.

Hawaiian by Ancestry: the Hawaii Health Survey

The DOH's Hawaii Health Survey (known until 1996 as the Health Surveillance Program or HSP) as described in detail above, is without a doubt the most comprehensive method for collecting information of whether a person is of Hawaiian ancestry. As described above, the Health Survey requests detailed information about a respondent's parents' ethnicities, and then codes as Hawaiian anyone with any amount of Hawaiian blood. For example, a woman with a full Chinese father and a mother who is 7/8 Chinese and 1/8 Hawaiian, who herself is 15/16 Chinese and 1/16 Hawaiian, will be coded as Hawaiian. This method ferrets out persons with any amount of Hawaiian blood and classifies them as such, even if they personally do not self-identify strongly or at all with their Hawaiian heritage. The Health Survey is usually carried out annually.¹⁶

The Health Survey and its predecessor, the Health Surveillance Program, is the most progressive and longest-running state survey of its type in the nation.¹⁷ For many years it was a model program. However, it was very labor intensive. First, a matrix of respondents needed to be built, and then a cadre of surveyors was needed to go into the community around the State to collect the data. Last, staff was needed to collate, interpret, and report the data. Due to budget cutbacks,¹⁸ data interpretation staff were cut back, and thus the reports took longer and longer to be released, which decreased their value to the planners and demographers. Finally, in 1995, no data were collected at all.¹⁹ When the survey began again in 1996, the name was changed from Health Surveillance Program to the Hawaii Health Survey, the format was changed, now being a telephone survey instead of an in-person survey. It also surveys, according to the demographers interviewed for this study, far fewer people and asks fewer questions than before, although the DOH disputes this.

Many of the community of demographers in Hawai'i criticize the changes in the format and indicate that the new version of the survey is not comparable to previous versions, so continuity of data has been lost. It is also alleged to be not as comprehensive, so valuable data is not being collected; and to contact far fewer people, so breakdowns of data for individual census tracts cannot be obtained. Queen Lili'uokalani Children's Center, for example, indicated that it needs data sorted by zip code, at the least, although sorted by census tract would be even more useful. County-

level data, which is what the survey produces now, is too big for their community efforts.²⁰ It is difficult to disbelieve these statements when they are repeated by public and private sources. To the extent that they are true, it is indeed troubling for Hawai'i, as the Health Survey is the primary in-state source of demographic data for all ethnic groups, including Hawaiians. Only the United States Census comes close in its ability to track statewide demographic data. Suggestions on improvements to the State's demographic data collection and tracking are discussed in chapter four.

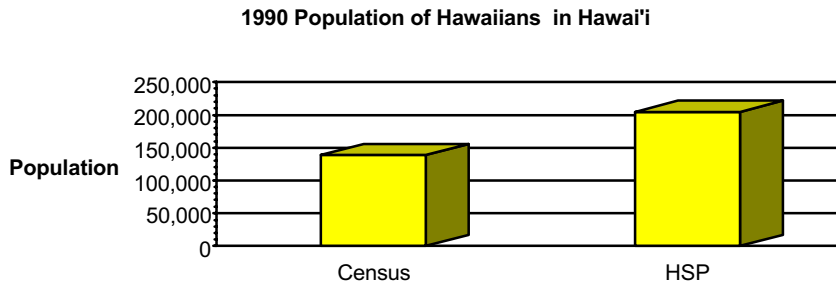
Hawaiian by Self Identification: The United States Census

The United States Census has been collecting ethnic and racial data on Americans since 1790.²¹ While the Census has undergone changes in classification of data over the years²², it is still a substantial body of knowledge that is often relied on for planning purposes. The Census does not pretend to track absolute racial heritage; in fact, as quoted above, it states that the category reflects self-identification and does not denote any clear-cut scientific definition of biological stock. The full Census is done only once every ten years, although a limited amount of demographic and economic data is collected annually in the Census Current Population Survey, and an economic census is done every five years.²³ As of the last Census, respondents were permitted to enter any one of a wide number of ethnic/racial groups, including Hawaiian, Japanese, Chinese, and Filipino, as their sole ethnic group, but the members of these groups were then placed into one of four top tier categories for classification purposes. Those four top-tier groups were Alaska Native or Native American, Asian/Pacific Islander, Black, and Caucasian.

As the Census does not investigate a respondent's heritage, but relies on a respondent's self-identification of a single ethnic identity, it collects many fewer respondents who self-identify as Hawaiians. As a racial group, Hawaiians are unusual in that the vast majority of its members are racially mixed. When pressed to select a single self-identifier, many of these mixed-race Hawaiians will identify as Hawaiian, but many will choose another facet of their ethnic heritage. The Census thus undercounts the number of people with Hawaiian blood. According to DBEDT, the Census does ask a question about ancestry, which more closely reflects the numbers that the DOH reveals, but most of the data reporting appears to be based on the self-identification classification, not the ancestry classifications.²⁴

The effect of this fluidity of ethnic identity among Hawaiians is demonstrated by the so-called paper genocide of the 1970s, when the Census categories changed from part and full Hawaiian to just Hawaiian. Many part Hawaiians chose to classify themselves as another ethnicity in that year, resulting in a dramatic and spurious decrease in the number of Native Hawaiians in the population.²⁵ The Hawaiian census numbers rose dramatically in the 1980 Census as more part-Hawaiians switched back to chose Hawaiian as their ethnic identity.

The effect of these two different methods of counting Hawaiians is demonstrated by a comparison of the Hawaiian population in 1990 as gauged by both the Census and the Health Surveillance Program (HSP). The Census reports 138,742 Hawaiians resident in Hawai'i in 1990; the HSP reports 205,079 -- 50% more than the Census figure.²⁶



Another more sophisticated example of the disparity can be seen in examining lower-income level Hawaiians. Table 8.11 of the *Native Hawaiian Data Book 1996* lists the number of Hawaiian households in 1989 with an income of less than \$15,000. Those figures, according to the Census, which uses self-identification, are 19.49%. However, Table 8.12 lists, for the following year, the number of Hawaiians with an income of less than \$15,000 as 25,298 people, or only 12.34% of the Hawaiian population. So the figure one uses to demonstrate how many Hawaiians are living on this income level differ markedly: from almost one-fifth the population to a much smaller 12%.²⁷

The disparity in numbers makes it extremely difficult to compare Census data with Health Survey and HSP data and obtain accurate results. As will be discussed in chapter 4, in the future there may be ways to minimize the data discrepancy. But for data that is being used right now, caution must be used to ensure that the course of data is reported, and that if data is compared, that the sources be collected in a similar fashion.

Data on Mainland Hawaiians

The resolution requested data on Hawaiians residing in the Mainland. This is difficult to obtain. The researcher was unable to find any agency in this or any other state that has collected this data. Thus the only source for this data is the Census. However, the undercount experienced for Hawaiians in Hawai'i between the Census and the true Health Survey/HSP figures would probably be more marked for Hawaiians on the Mainland. Hawaiians in Hawai'i, who are largely multi-racial, are often exposed to positive Hawaiian role models, such as past Governor John Waihee and United States Senator Daniel Akaka, and positive Hawaiian events, such as the resurgence of the Hawaiian language through the Pūnana Leo preschools and the DOE Kula Kaiapuni and the increased visibility of the Hawaiian sovereignty movement. These and other frequent reminders of Hawaiian pride and the resurgence of Hawaiian

culture may spur persons of mixed-Hawaiian ethnicity to select Hawaiian when only a single ethnic choice must be made. As one researcher notes:

[I]ncentives for declaring oneself or one's parents as Hawaiian have changed. There were true disadvantages to reporting Hawaiian ancestry for much of the century. Starting in the 1970s, a growing tolerance of diversity, local sovereignty movements, and programs that gave Hawaiians increased access to education and land have resulted in a resurgence of pride in Hawaiian heritage.²⁸

But Hawaiians on the Mainland, who statistically are probably also largely multi-ethnic, do not have the same degree of exposure to these instances of Hawaiian pride. They may therefore be less likely to self-identify themselves as Hawaiian. The Census figures, then, may have a greater degree of underreporting for Mainland Hawaiians than they do for Hawaiians in this State. The current Census figures for Mainland Hawaiians should therefore be viewed with caution.

Summary

While public and private agencies are collecting a large amount of demographic data on Hawaiians, their different methodologies make it difficult at times to compare data across reports with accuracy. The biggest schism in data collection is whether to accept self-identification alone for Hawaiian identity, or whether to look at ancestry. Both methods have an internal logic and both have their proponents, but the conflict between the two methods means that data cannot accurately be cross-referenced between the two major types of collection. It also means that to a certain extent, one can select data to bolster one's position, depending on the data calculations used. This, of course, makes state planning extremely tenuous.

In contrast to the relatively abundant data on Hawaiians residing in this State, data on Mainland Hawaiians is scanty. The only entity that appears to be collecting data at this time is the United States Census, which uses a self-identification methodology. It seems highly probable that the Census figures underreport the actual number of persons with Hawaiian blood on the Mainland, based on the fact that the Census demonstrably underreports the number of persons with Hawaiian blood in Hawai'i.

Endnotes

¹ Robert W. Gardner and Eleanor C. Nordyke, "The Demographic Situation in Hawaii," *Papers of the East-West Population Institute No. 31* (June 1974) at 24.

² Robert C. Schmitt, "How Many Hawaiians Live in Hawai'i?" *Pacific Studies*, Vol. 19, No. 3, September 1996 at 34.

³ Office of Hawaiian Affairs, *Native Hawaiian Data Book 1998* (Honolulu). At the time this report was prepared, the 1998 version of this book was available only on the Internet at <http://www.lava.net/~plnr>.

⁴ Hawaiian Homes Commission Act, 1920, sec. 201(a)(7). The Act is a compact between the federal government and the Hawai'i state government. See An Act to Provide for the Admission of the State of Hawaii into the Union, sec. 4 (1959).

⁵ Vital statistics were first required to be reported in 1896. Act 50 (Laws of the Republic of Hawaii 1896). However, censuses were taken far earlier. It is reported that King Umi took a census about 1500, and earlier sailors made population estimates. Missionaries attempted a census in 1831-1832. King Kamehameha first ordered a census in 1840, but the first official complete census was not made until 1850. Robert C. Schmitt, *Historical Statistics of Hawaii* (Honolulu: University of Hawaii Press 1977) at xvii and 4.

⁶ Andrew Lind, *Hawaii's People* (4th ed. 1980) at 25.

⁷ *Id.* at 26.

⁸ *Id.*

⁹ Schmitt at xviii and 4.

¹⁰ *Id.*, at xviii.

¹¹ Lind at 26.

¹² *Native Hawaiian Data Book 1996* at 553.

¹³ Telephone interview with Jan Nakamoto, Hawaii State Data Center, Research and Economic Analysis Division, Department of Business, Economic Development, and Tourism, on August 5, 1998.

¹⁴ *Native Hawaii Data Book 1996* at 553. These definitions are codified in section 10-2, *Hawaii Revised Statutes*.

¹⁵ *Id.* at 554.

¹⁶ Except for 1995, when no survey was done.

¹⁷ Interview with Dr. David Johnson, research associate, Pacific Health Research Institute, on July 13, 1998.

¹⁸ Interview with Dr. Alvin Onaka and Brian Horiuchi, Department of Health, on August 4, 1998.

¹⁹ The reason for no data collection in 1995 was because the governor froze the vendor's contract and so the data collection could not begin on time. The data needed to be collected during the full year, so 1995 had to be skipped. Telephone interview with Jim Cooper, QUEST (former head of the Health Surveillance Program, on July 23, 1998.

²⁰ Interview with Neal Oyama and Tim Wong, Queen Lili'uokalani Children's Center, June 17, 1998.

²¹ Nampeo R. McKenney and Claudette E. Bennett, Issues Regarding Data on Race and Ethnicity: the Census Bureau Experience, in *Public Health Reports: Journal of the U.S. Public Health Service*, Vol. 109, No. 1 (Jan-Feb. 1994) at 16.

²² For example, the 1960 and 1970 Census classified children who were left unclassified by their parents (often because the children were multi-racial) according to their mother's race. In 1980, there was a switch to classify them according to their father's race. The Census has also changed how other ethnic groups are classified; people of Portuguese ancestry, for example, used to be classified as just Caucasian, and are now classified as Other Hispanic.

²³ Nakamoto interview.

²⁴ *Id.*

²⁵ Mele A. Look and Kathryn L. Braun, A Mortality Study of the Hawaiian People 1910-1990 (The Queen s Health System 1995) at 6.

²⁶ *Native Hawaiian Data Book 1996*, Table 1.4 at 10.

²⁷ These two different percentages are referring to roughly the same pool of people: the Table 8.12 HSP figure of individuals is 25,298. The 8.11 Census table lists only a household number, 6576, but when that is multiplied by the average number of Hawaiians per household from Table 2.4 for an approximate count of individuals, the figures are close to that: a range of 21,800 to 26,304. So approximately the same number of Hawaiians are living in this income bracket, but the greater total of Hawaiians counted in the HSP makes the percentage living in poverty appear smaller.

²⁸ Kathryn L. Braun et al., Age-Specific Native Hawaiian Mortality: A Comparison of Full, Part, and Non-Hawaiians, in *Asian American and Pacific Islander Journal of Health*, Vol. 4, No. 4 (Autumn 1996) at 354 (footnotes deleted).

Chapter 3

THE DEMOGRAPHERS AND THEIR DATA

Numerous studies indicate that persons may have several racial and ethnic identifications and that their identification may change over time and across circumstances.¹

This chapter contains an overview of the primary Hawaiian demographic data that has been produced in the 1990s, along with a description of the major entities that produce the data, or take data produced by others and interpret and report it. While the resolution requesting this study requested that this data be compiled, it was not realistic, due to the volume, to include all the data as an appendix to this report. Selected data is contained in the appendix, and much of the rest of the data is contained in a special section in the Legislative Reference Bureau Library. Not all the data could be collected in the library as some data sources are out of print.

The Demographers

There are at least five categories of agencies or individuals in the private sector who either collect Hawaiian demographic data, or take raw data others have collected (such as the Census and the Department of Health (DOH) Health Surveillance Program (HSP)/Health Survey), and analyze and report it or act on it. These agencies and groups -- ALU LIKE, Inc., Papa Ola Lōkahi, Queen Lili'uokalani Children's Center, Kamehameha Schools/Bishop Estate, and the private health researchers -- are an important part of demographic data collection and use in Hawai'i.

ALU LIKE, Inc.

The mission of ALU LIKE, incorporated in 1975, is to kōkua Hawaiians who are committed to achieving their potential.² It is funded by state, federal, county, and private sources, including the Office of Hawaiian Affairs (OHA), and has branches on O'ahu, Hawai'i, Maui, Kaua'i, and Moloka'i. It offers programs and projects in employment, economic development, education, social development, and corporate development/collaboration.³ ALU LIKE's highly regarded research and analysis statistics unit used to be large enough to perform primary research and analyze, interpret, and report other primary source data, such as U.S. Census data. In the 1970s and 1980s, ALU LIKE produced an impressive amount of detailed Hawaiian demographic data, broken down by island and between part-Hawaiians and pure Hawaiians.⁴ ALU LIKE reports also covered criminal justice, socioeconomic and housing characteristics of Hawaiians, vocational needs assessment, mental health and

substance abuse, educational, employment, and training needs of Hawaiian youth, nutrition and dental status, and general health status.⁵ In more recent years, funding issues have curtailed the size of this unit so that fewer reports are able to be produced.

Papa Ola Lōkahi

This agency was created in response to the federal Native Hawaiian Health Care Act⁶ to coordinate, implement, and update the federally specified comprehensive health care master plan designed to promote comprehensive health promotion and disease prevention services and to maintain and improve the health status of Native Hawaiians,⁷ and to research into diseases that are most prevalent among Native Hawaiians.⁸ Papa Ola Lōkahi is also required to serve as a clearinghouse for the collection of data associated with the health status of Native Hawaiians.⁹ For the purposes of the Act,¹⁰ Native Hawaiian means any person with any Hawaiian blood.

Papa Ola Lōkahi is composed of the following organizations: E Ola Mau, OHA, ALU LIKE, Inc., the University of Hawai'i, and the five Hawaiian health centers that provide services on each of the inhabited islands: Ho'ola Lahui Hawai'i on Kaua'i and Ni'ihau; Ke Ola Mamo on O'ahu; Nā Pu'uwai on Moloka'i and Lana'i; Hui No Ke Ola Pono, on Maui; and Hui Malama Ola Nā 'Oiwi, on the island of Hawai'i.¹¹ Papa Ola Lōkahi put together the first Native Hawaiian Health Data Book in 1992; and that information was incorporated into OHA's subsequent Native Hawaiian Data Book publications.¹² Due to funding constraints, research staff has been cut back and Papa Ola Lōkahi is now doing less research than it formerly was able to do. Papa Ola Lōkahi's studies primarily focus on health, but its studies can contain relevant socio-economic data as well.¹³

Kamehameha Schools/Bishop Estate (KSBE)

Kamehameha Schools, whose mission is the education of children of Hawaiian ancestry, has been the agency primarily responsible for updating knowledge on Hawaiian educational needs.¹⁴ KSBE published the first Native Hawaiian Educational Assessment Project Report, submitted to Congress, which has been used, along with its follow-up studies, to plan and support educational programs relating to Hawaiians,¹⁵ including the 1998 federal Native Hawaiian Education Plan.¹⁶ The study is not restricted to education but also covers a number of areas that have an impact on children and the educational process, such as population counts, low-birthweight births, prenatal care, pregnancy outcomes, birth defects, abuse and neglect statistics, drug use and alcohol use for juveniles, and juvenile arrest records. Most of the data comes from the state Department of Education, but the study cites a range of sources, including the Census, the Department of Health, the University of Hawaii, the Department of Human Services, the Department of the Attorney General, and KSBE itself. KSBE is heavily reliant on other agencies for its primary data, but serves an

extremely valuable function by collating and reporting on the figures for Hawaiian students.

Queen Lili'uokalani Children's Center (QLCC)

QLCC is a social services agency that in prior years was primarily involved in child/family counseling. Its present mission is shifting away from that type of support to creating community-partnerships in which a whole community, not just an individual family, is the beneficiary. Part of its efforts rely on receiving accurate data from the Department of Health's Health Surveillance Survey, the Department of Health's Vital Statistics Branch, the Department of Education, the Department of Human Services, and the county police departments.¹⁷ QLCC uses these primary sources and does not, for the most part, generate primary data. It has its own statistical software which permits it to manipulate this data to provide detailed information about the communities it partners with.

Private Health Researchers

Perhaps the greatest amount of demographic data can be found in the health area. Agencies such as Pacific Health Research Institute, Queen Emma Community Health, and the Cancer Research Center of Hawai'i, as well as individual researchers use original data or the DOH's Vital Statistics Division and Hawaii Health Survey/Health Surveillance data to produce statistics on Hawaiian health. As shown below, there is a wealth of information available on a variety of subjects including prenatal care, infant mortality, diabetes, cancer, obesity, and heart disease. Some of the research is broken down into part-Hawaiian and full-Hawaiian categories as well. Some of the researchers noted that it is unclear what the effects of genetics alone plays on Hawaiian health, and that certain susceptibilities of Hawaiians may be influenced by behavioral patterns.¹⁸

The Data

There is an enormous amount of demographic data on Hawaiians who reside in Hawai'i. The scope of this data is so broad that to keep the information to a manageable level, this report will concentrate primarily on data from the 1990s. This by no means should be taken to indicate that there is a dearth of data prior to 1990; indeed, because programs such as ALU LIKE's were better funded in the past, the data from the 1980s is in some respects even more extensive than the data available today. Some of the studies and reports that include this earlier data are included in the Appendices. However, it was thought that for the most part, the later data would be the more helpful to the Legislature for planning purposes, and so this chapter will focus primarily on data from the 1990s.

In requesting this study, the Legislature did not indicate the purpose for which the Hawaiian demographic data was to be collected, stating only that the data would assist the Legislature in making informed decisions on current and future Native Hawaiian programs and issues.¹⁹ As this rationale is broad and open-ended, the researcher assumed that the most inclusive categories of demographic data should be compiled, as the future need could not be fully predicted. Therefore, in addition to the categories of total population, residence both in Hawaii and elsewhere, and distribution by age, gender, blood quantum, education, and income, requested by the resolution, this study has included demographic information on health status and housing.²⁰

While the amount of data is vast, the majority of the data are derived from two primary sources: the United States Census and the State of Hawai'i Department of Health. The full Census is conducted every ten years; the next will be held in the year 2000. The Census compiles a massive amount of data, some of which are released in reports that come out in the years that follow the taking of the Census. Other data are available on tapes and CD-ROMs but most are raw data, which must be processed and interpreted by the individual researcher.²¹ Special tabulations are also produced by the Census Bureau on a fee basis. Release of raw data alone is not a responsible method of reporting demographic data. The Census does perform limited data-gathering in the years between censuses,²² but most of the data is only available at ten year intervals.

The Census is the only source of demographic data on Hawaiians who live in states other than Hawai'i. The researcher was unable to find any other entity, in Hawai'i or on the Mainland, which has collected reliable data on Hawaiians living on the Mainland. The researcher was informed that the Pacific Islanders Cultural Association, a San Francisco-based nonprofit agency whose mission is to serve the Northern California Pacific Islander community, is in the process of beginning a needs assessment study funded by the Mayor's Office in San Francisco, which will include demographic data on Hawaiians. However, the researcher was unable to obtain further information on the scope of that study.

The number of Hawaiians on the Mainland is significant: according to Census data, of all the Hawaiians in the United States, two-thirds live in Hawai'i and the rest live on the Mainland. At the time of the most recent Census, approximately half of all Mainland Hawaiians -- 34,447 -- lived in California.²³ Other states with relatively high numbers of Hawaiians were Washington, with 5,423; Texas, with 2,979; and Oregon, with 2,415.²⁴ The State shows foresight in attempting to collect data on the Mainland Hawaiians, as they need to be considered as having a potential impact on any entitlement programs offered by the State. For example, at the time this study was being prepared, a member of the University of Hawai'i Board of Regents and the University of Hawai'i's Center for Hawaiian Studies suggested that free tuition be offered to all students of Hawaiian ethnicity.²⁵ If the Legislature intends to implement this concept, unless it intends to restrict the free tuition to resident Hawaiians only, it would be necessary in the planning process to take into consideration the number of Mainland Hawaiians who may want to participate.²⁶

As discussed in chapter 2, the 1990 Census required respondents to select only one ethnic group. This is problematic for Hawaiians, as the vast majority of them are of mixed ethnic heritage. While many mixed-race Hawaiians are proud of their Hawaiian ancestry and selected that as their sole ethnicity for Census purposes, many others, who may also be proud of their Hawaiian heritage, identify more with other elements of their ethnic identity and selected another ethnic identity for the Census. This has led to a significant undercount of multi-ethnic Hawaiians, which is evident from comparison of the Census figures with the DOH Health Surveillance Program (now known as the Hawaii Health Survey). The HSP/Health Survey, as described in chapter 2, asks respondents for their parents' ethnicities. The HSP/Health Survey codes a person as Hawaiian if any of the ethnicities listed by either of that person's parents is Hawaiian, regardless of what the person's own conception of his or her ethnic identity. For example, someone with one pure Chinese parent and one parent who is three-quarters Chinese and one-quarter Hawaiian would be coded as Hawaiian, even though the person is seven-eighths Chinese and only one-eighth Hawaiian. The Health Survey now also asks a person to self-identify an ethnicity, but those are not the identities coded by the DOH.

The gap between the Census and the past HSP figures for Hawaiians is great: in 1990 (the date of the last full Census), the Census reported that there were 138,742 Hawaiians in Hawai'i, while the same year the HSP reported that there were 205,079 Hawaiians in Hawai'i or almost half again as many. This marked discrepancy is the one of the major factors that makes data about Hawaiians so difficult to compare. But this situation may change for the better starting with the year 2000 Census. The federal Office of the Census has announced that it will change the way data will be coded for the year 2000 Census in two ways that are significant to Hawai'i. First, Hawaiians will be removed from the Asian-Pacific Islanders category and placed into a new Hawaiian-Pacific Islanders category. This will help break out the Hawaiian data, which has tended to be swamped by the data from the much larger Asian population.²⁷

Second, for the first time the Census will permit respondents to list multiple ethnicities. In prior years, a person was allowed to choose only one ethnicity. People in Hawai'i and on the Mainland campaigned since the last census to have multiple ethnicities added to enable a more complete picture of an increasingly multi-ethnic population.²⁸ The specific benefit to Hawai'i is that this will permit multi-ethnic Hawaiians who were previously self-identified as one of their other ethnic heritages to also have their Hawaiian ethnicity counted. While the way in which the Census will collapse the matrix of multi-ethnic persons to code them into one of the five top-tier identities is not known at this point, it may well have the effect of increasing the Census count of Hawaiians and bringing it more in line with the Hawaii Health Survey count. If this happens, then the Census and Hawaii Health Survey data will be able to be compared in ways that are not possible now.

The Census Bureau will be able to produce reports cross-tabulating the Asian categories with those of the Hawaiian/Pacific Islanders.²⁹ It is uncertain what other data crosses will be available.

However, the change in the Census will only solve part of the data comparison problem. While the Census/Health Survey discrepancy is the largest and most noticeable of data discrepancies, other state agencies also have significant discrepancies in the way they calculate who is Hawaiian, which hinders the comparison of data collection by state agencies. As discussed in chapter 2, the *Native Hawaiian Data Book* appendix, *Definitions of Race*, lists seventeen state agencies that collect data on Hawaiians, and many of them use differing methods, ranging from single-category self-identification, multiple self-identification, ethnic heritage from the parents, reporting by relatives, doctors, or medical personnel, eyeballing (assumptions made by personnel based on the person's appearance), and person's last name (especially problematic in a multi-cultural society). Unless the data from one source is being compared against the same group of Hawaiians (the demographers call this having the same denominator), the comparisons can be misleading at best and useless at worst. It is not uncommon, for example, to see newspaper articles that state that, for example, Hawaiians make up 20% of the general population but 38% of the prison population,³⁰ without acknowledging that the figures are derived differently.

This discrepancy in data reporting has been recognized by demographers and researchers in the field. One notes: The task of creating ethnic categories from this information is problematic, especially in a population such as Hawaii, where there are many different groups and a large number of individuals of mixed heritage.³¹ One 1993 KSBE report illustrates the disparity in population counts by comparing the 1990 U.S. Census Hawaiian population figures (12.5% of the population) with the 1990 Hawaiian births as recorded in the state Department of Health (32.9%), and with the 1992-93 Department of Education (DOE) enrollment figures for Hawaiians (23.4%). The report states that all three of these data sources, and others, are valuable for some aspects of this study. It is crucial, however, to carefully consider the differences between them in how data are acquired and used.³² (emphasis added) However, this message is not flagged in the text that accompanies the voluminous number of charts and it is not stated how the different agencies (e.g., Department of the Attorney General) calculate who is Hawaiian, so the warning is not as effective as it might otherwise be.

One of the researchers summarizes the situation, when comparing data sources including Vital Statistics, HSP, the Tumor Registry, and the Census, by stating:³³

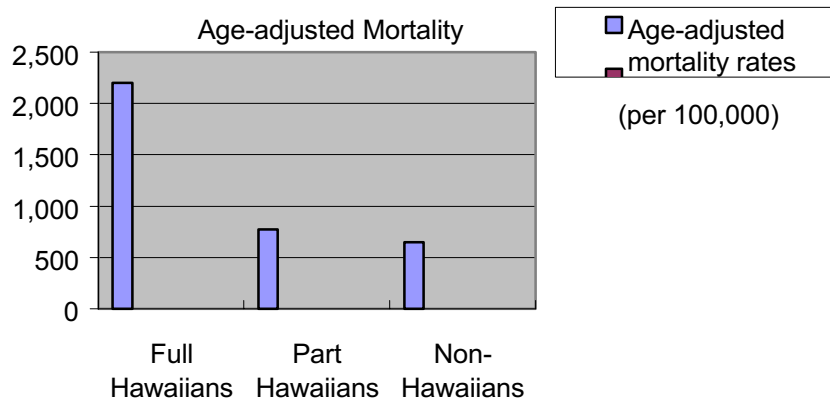
From a researcher's viewpoint, the sociodemographic and health data reported and summarized here seem variable and of irregular validity. This situation reflects the long neglect of Kanaka Maoli in their homeland until recently, the increasing out-mating of Kanaka Maoli with immigrants from the West and from

the East, and the unstandardized methods of identifying Kanaka Maoli and other ethnic groups, and for collecting and reporting data about them.

Given the foregoing, the following sources of data in general should be considered self-contained. Data should not be compared across categories unless the denominator (the way in which those of Hawaiian ethnicity were coded) is the same for all sources of data.

General

OHA, *Native Hawaiian Data Book 1996*. This book (the 1998 version was available on the Internet as this report was being prepared but the 1998 hard copy was not available) is the largest single general compilation of data on Hawaiians. The 266 tables are too numerous to report here in detail, but the full list of tables can be found in Appendix B. The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime;



and income and employment. While the book is a prodigious feat of collection, none of the data is primary source data, and while the editor is careful to cite the data sources and includes a listing of the ways in which the various state and federal agencies define who is Hawaiian, it would be tempting but wrong to attempt to use the data across most categories, given the different way in which the Hawaiian identity is coded.

ALU LIKE, *Native Hawaiian Data from OEO 1975 Census Update Survey*. This extremely comprehensive survey, broken down into full and part-Hawaiians, collects data in eight major categories: population structure, residence in Hawai'i, education, personal income, employment, housing costs, and housing characteristics. Each of these major categories is broken down into exhaustive detail. It appears as though ALU LIKE has not been able to produce a work like this in more recent times due to funding shortages, so funding ALU LIKE to do this with the 2000 census figures would provide the State with a wealth of valuable data.

The specific information provided is:

Population structure

- Population and household estimates by district
- Sex by district
- Age by district
- Ethnicity by district
- Marital status of population age 14 and older by district
- Marital status of population 18 and older by age
- Number in household by district
- Relation to head of household by district
- Sex of head of household by district
- Number of dependents in household by district

Residence on Hawaii

- State residency by district
- Place of birth by district
- Citizenship by district
- Lifetime State and Island residency by district
- Lifetime State and Island residency of population by age
- Place of residency one year ago by district
- Place of residency five years ago by district

Education

- Highest grade completed for population age 6 and older by district
- Highest grade completed for population age 18 and older by district
- Highest grade completed for population 25 and older by district
- High school graduation among population 25 and older by district
- Student status of population 3 through 34 by district

Income

- Personal
 - For population 16 or older by district
 - For population 16 or older by sex
 - For population 16 or older by marital status
 - For population 16 or older by highest grade completed
- Household and family
 - Household by district
 - Household by sex of head of household
 - Household by size of household
 - Family by district
 - Family by sex of head of household
 - Family by military status of head (all, and all larger than one)
 - Family by family income

Employment

- Employment status of the population 14 and older by district
- Employment status of the population 14 and older by age
- Employment status of males 14 and older by age
- Employment status of females 14 and older by age
- Hours worked the previous week
- Weeks worked the previous year
- Occupation of 16 and older by district
- Industry of 16 and older by district
- Number of weeks of unemployment by district
- Unemployment compensation figures by district
- Unemployment among 14 and older by district
- Occupation of unemployed population 16 and older by district
- Industry of unemployed population 16 and older by district
- Occupation of unemployed population 16 and older
- Industry of unemployed population 16 or older
- Personal income for population 16 or older by employment status

Housing costs

- Owner occupancy and renter occupancy by district
- Total monthly housing costs for owner-occupied units by district
- Monthly maintenance costs for units rented for cash rent by district
- Leasehold or fee simple ownership of units by district
- Monthly lease rent for owned-occupied leasehold units
- Total monthly rent for units rented for cash rent by district
- Monthly utilities cost for units rented for cash rent by district
- Owners of units rented by households or occupied without cash rent by district
- Housing characteristics
- Number of rooms per unit per district
- Number of bedrooms unit per district
- Availability of hot and cold running water by district
- Availability of complete kitchen facilities for unit by district
- Type of housing units per district
- Number of floors in the housing structure by district
- Presence of passenger elevator in the structure by district
- Units per structure per district
- Condition of housing units by district

Additional information

- Poverty level classification by district
- Education by occupation
- Education by industry
- Education by employment status
- Income by type of ownership

Department of Business, Economic Development, and Tourism, *The State of Hawaii Data Book 1996*. This publication contains information on: ethnic stock by military status 1992 (using DOH data), ethnic stock by counties 1992 (DOH data), race and Hispanic origin 1980 and 1990 (Census data), Hawaiians living in Hawai'i and in other states (Census), ancestry 1990 (Census), Hispanic origin by race 1990 (Census), Expectation of Life at Birth for Both Sexes Combined, by Race: 1910-1990 (DOH data).

Research and Statistics Unit, ALU LIKE, Inc., and Social Sciences Research Institute, UH Manoa, *Profile of Hawaiians in the 1980 Decennial Census for Oahu Island* (September 1984). This report modified the census tables as adjusted based on data from the State Health Survey. The report notes that the disparity in reporting of Hawaiians between the census and the health survey is 57,658: 1980 census, 118,251; 1981 Health Survey 175,909. Id. at xi. Info collected is on:

- Population structure
- Persons, households, and families
- Sex by age
- Persons in household
- Persons in family
- Persons in group quarter
- Household type and relationship
- Family type
- Residence
- Residence in 1975
- Education
- School enrollment by type of school
- Sex by age for school children
- Sex by age for years of school completed
- Median years of school completed by sex and age
- Labor force status by age and education
- Income
- Household income type in 1979
- Aggregate household income in 1979 by household income type in 1979
- Family income in 1979 by age of householder
- Workers in family by family income in 1979
- Median and mean family income by number of workers in family in 1979
- Aggregate family income by number of workers in family (1979)
- Median personal income in 1979 by sex by age
- Per capita income by living arrangement (1979)
- Poverty status and receipt of public assistance in 1979
- Employment
- Sex by labor force status and inmate status
- Sex by age by labor force status
- Sex by industry by class of worker
- Sex by occupation
- Sex by labor force status

Family type and number of workers in family
Housing
Household income in 1979 by tenure
Median household income in 1979 by tenure
Aggregate household income in 1979 by tenure
Tenure by persons in unit
Tenure (persons in occupied housing units)
Tenure by median persons in unit
Tenure by median rooms per unit
Household income in 1979 by number of persons in unit
Household income in 1979 by percentage of income spent on gross rent
Gross monthly rent
Mortgage status and selected monthly owner costs.

ALU LIKE, Inc., *Hawaiian Population by District and Census Tract in the 1990 Decennial Census* (1991).

ALU LIKE, Inc., *The Demographic, Social, and Economic Studies of Native Hawaiians* (1990), written by Herbert Barringer and Nolan Liu.

David ohnson, Chapter 4: Data Sources and Methodology in *Social Process in Hawaii*. HSP demographic data included composition of household, number of persons, relationship, marital status, income, area of residence, age, gender, ethnicity, years of education, occupation, and employment status.

OHA, *Population Survey/Needs Assessment: Final Report* (une 1986). This is apparently the only primary research that OHA has done. Its most significant data is the calculation of Hawaiians by amount of Hawaiian blood (blood quantum) in three categories: 100%, 50% or more, and less than 50%. Other data include: a list of problems experienced by the respondents and sources of help, and satisfaction with services, education, self-sufficiency and work, housing, jobs, land tenure, Hawaiian lifestyle, Hawaiian rights, and Hawaiian culture. All of this data is dated, being over 14 years old. Still, while the social data may change, the blood quantum study is still considered valuable as a snapshot of the Hawaiian people. It may be used as data to extrapolate information about the future existence of Hawaiians. The federal Office of Technology Assessment performed a 55-year data projection (see citation immediately below) on the number of Hawaiians and blood quantum.

Current Health Status and Population Projections of Native Hawaiians Living in Hawaii, staff paper prepared by the Health Program, Office of Technology Assessment, U.S. Congress, April 1987 (copy on file at the LRB Library): This older study gives 55-year data projections on number of Hawaiians by age, gender, and blood quantum (note that it labeled Hawaiians with less than 1/8th Hawaiian blood as Non-Native Hawaiians and does not include them in all projections; note also the report's own cautions about data overestimations due to assumptions about out-migration).

ALU LIKE, Inc., *Criminal Justice and Hawaiians in the 1990s* (1994), written by Gene Kassebaum.

Health

The Department of Health's Office of Health Status Monitoring has come out with regular publications throughout the 1990s on the general health of the state population. Many of those statistics are broken out by ethnic status. The data specified in the report cited below is by ethnicity, including Hawaiian.

Department of Health, *Biennial Report for 1991 and 1992 – Vital Statistics Supplement* (1994) (prior to this report, the statistics were contained in the DOH annual reports). The appendix contains ninety-five charts of health statistics, broken down by ethnic group for each of the years in question, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

Department of Health, *Report for the Year 1993 – Vital Statistics Supplement* (1995). The text lists ethnic breakdowns for incidence of and mortality from breast cancer and population age 65 or older for the years 1963 through 1993. The appendix contains ninety-five charts of health statistics, broken down by ethnic group, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

Department of Health, Office of Health Status Monitoring, *Report for the Year 1993 - Vital Statistics Supplement* (1995). The text contains HIV deaths by race. The appendix contains ninety-five charts of health statistics, broken down by ethnic group, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

Department of Health, Office of Health Status Monitoring, *Vital Statistics Supplement 1995* (April 1997). The text contains several charts on infant mortality rate for Hawaiians by island, 1991-1995. The appendix contains ninety-five charts of health statistics, broken down by ethnic group, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

Department of Health, Office of Health Status Monitoring, *Vital Statistics Supplement 1996* (April 1998). The appendix contains ninety-five charts of health statistics, broken down by ethnic group, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

Department of Health, Office of Health Status Monitoring, *Health Surveillance Survey: Report for Years 1989-1992* (January 1996). Contains ethnic breakdowns for

malignant neoplasms (cancer), diabetes, heart conditions, hypertension, asthma, acute conditions, and chronic conditions.

Department of Health, Office of Health Status Monitoring, *Vital Signs Hawai'i : 1994 Supplement* (May 1996). Contains ethnic breakdowns for: number of suicides, limitations of activities (for the disabled), smokers, infant mortality rate, and pregnancy. Note that the counterpart published in 1994 covering the years since 1990 contained no breakdowns by ethnic group.

Department of Health, Office of Health Status Monitoring, *Vital Signs Hawai'i: Key Indicators of Health Status in Hawaii, 1995 Supplement* (March 1997). Presents breakdowns for lung cancer deaths, murder victims, obesity, and activity limitations due to impairment of the back and spine.

ALU LIKE, Inc., *Dental Health Assessment of Native Hawaiian Elderly* (1996). Based on participants in ALU LIKE s Ke Ola Pono No Nā Kupuna program.

ALU LIKE, Inc., *Ke Ola Pono No Nā Kupuna Special Studies* (1997). Report presented by Dr. David Johnson of PHRI of annual health evaluations of Hawaiian elders.

ALU LIKE, Inc., *The Native Hawaiian Elderly Needs Assessment Report* (1990).

Papa Ola Lōkahi, *Native Hawaiian Health Data Book* (1992). This source contains information on population demographics, characteristics of pregnancies, mortality, cancer, chronic conditions, risk factors, and services. This book was folded into the Native Hawaiian Data book in 1994.

Richard Kekuni Blaisdell, The Health Status of Kanaka Maoli, in *Asian American and Pacific Islander Journal of Health*, Vol. 1, No. 2 (Autumn 1993). A well-researched secondary source, with some data of pure as well as part-Hawaiians, in the areas of population, geographic distribution, gender and age, family and household, education, occupations, income, life expectancy, mortality (including comparative data on heart disease, cancer, cerebrovascular disease, accidents, diabetes, bronchitis/emphysema/asthma), maternal and child health (including birth rate, infant mortality, congenital defects, illegitimate births, and pregnancy process and outcomes), morbidity (arterial hypertension, asthma/bronchitis/emphysema), heart disease, diabetes, cancer, and dental caries), various risk factors (non-use of seatbelts, obesity, hypertension, smoking, alcohol use, sedentary lifestyle, and cholesterol), mental health (psychological diagnoses, mental retardation, suicide, child abuse, alcohol use and abuse, drug abuse, and crime).

Richard Kekuni Blaisdell, 1995 Update on Kanaka Maoli (Indigenous Hawaiian) Health, in *Asian American and Pacific Islander Journal of Health*, Vol. 4, No. 1-3 (Winter-Summer Issue 1996). Updates findings from 1990 to 1995 on mortality, birth rates, and AIDS rates.

Mele A. Look and Kathryn L. Braun, *A Mortality Study of the Hawaiian People 1910-1990* (The Queen's Health Systems 1995). This study compiles and compares detailed data for full-Hawaiians, part-Hawaiians, and all races for the decades 1910 through 1990 for all leading causes of death.

Kathryn L. Braun et al., *Life and Death in Hawaii: Ethnic Variations in Life Expectancy and Mortality, 1980 and 1990*, in *Hawaii Medical Journal*, Vol. 55 (December 1996). This study presents life expectancy estimations for Caucasian, Chinese, Filipinos, Japanese, and Native Hawaiians (full and part) for 1980 and 1990, along with ethnic differences in mortality rates for specific causes of death.

Edith C. Kieffer et al., *Native Hawaiian Birth Weight and Infant Mortality: Is Birth in Hawai'i Protective* in *Asian American and Pacific Islander Journal of Health*, Vol. 4, No. 4 (Autumn 1996). This study provides baseline information on the maternal characteristics, prenatal care use, neonatal morbidity, and infant mortality in native Hawaiians living in Hawai'i as compared to native Hawaiians living on the U.S. Mainland from 1983-87.

The Native Hawaiian Health Research Project, *Diabetes Mellitus and Heart Disease Risk Factors in Hawaiians*, in *Hawaii Medical Journal*, Vol. 53 (December 1994). This article collects information currently (in 1994) available on diabetes mellitus and heart disease risk factors in native Hawaiians.

David Johnson, Chapter 5: *An Overview of Ethnicity and Health in Hawaii* in *Social Process in Hawaii*. Contains information on ranking of causes of death by ethnic group; age-adjusted death rates by cause, gender, and ethnicity; ranking of age-adjusted rates of chronic conditions by ethnicity; age-adjusted prevalence of chronic conditions by gender and ethnicity; and effects of morbidity, Native Hawaiians compared to total Hawai'i resident population.

Claire Ku'uleilani Hughes, et al., *Diet-Related Cancer in Native Hawaiians*, *CANCER Supplement*, Vol. 78, No. 7 (October 1, 1996). This report reviews and integrates literature on cancer among Hawaiians, revealing the extremely high cancer rates for Hawaiians and the most prevalent types of cancer. It suggests a cultural context for Hawaiian health care and consideration for dietary intervention. Note the substantial number of articles listed in the footnotes on Hawaiian health.

Kathryn L. Braun et al., *Age-Specific Native Hawaiian Mortality: A Comparison of Full, Part, and Non-Hawaiians*, in *Asian American and Pacific Islander Journal of Health*, Vol. 4, No. 4 (Autumn 1996). Updates the 1982 Look study on mortality rates for full-, part-, and non-Hawaiians, focussing on 1980 and 1990 figures. Includes graphs on all-cause, heart disease, and malignant neoplasm mortality. The data show that part-Hawaiians have a higher rate than non-Hawaiians, and full-Hawaiians have a higher rate than part-Hawaiians.

Kathryn L. Braun et al., High Mortality Rates in Native Hawaiians, in *Hawaii Medical Journal*, Vol. 54, No. 9 (September 1995). This paper examines the mortality rates for full-Hawaiians, part-Hawaiians, and all races from 1910 to 1990. Differs from the previous paper by breaking down the category of malignant neoplasm to cancers of breast, lung/bronchial, and colon/rectum.

Haiou Tang et al., *Life Expectancy in the State of Hawai'i: 1980 and 1990*, Office of Health Status Monitoring, Department of Health, R S Report Issue No. 63 (August 1996). Sets forth tables of life expectancy by ethnic group and gender. Makes important points: the value of life expectancy as a tool for planning (at 3); the difference between the default census approach in 1970 and 1990 (at 5); why life expectancy data looks better for Hawaiians when DOH data is used (as compared to the Census) (at 12); and the complexity of ethnic data in Hawai'i.

Mele Look et al., Health of Hawaiian Women, (1998) (unpublished at the time this report was prepared). This paper compares the health status of wahine kanaka maoli to women of other ethnic groups in Hawai'i for life expectancy, heart disease, cancer incidence, cancer mortality, reproductive health, pregnancy outcomes, teen births, prenatal care, and breast-feeding.

David B. Johnson et al., Papa Ola Lōkahi Hawaiian Health Update: Mortality, Morbidity, Morbidity Outcomes and Behavioral Risks, presented to Papa Ola Lōkahi on March 1, 1996. This manuscript is part of the E Ola Mau Update Project of Papa Ola Lōkahi. Health records for the periods 1980-86 and 1989-91 were compared for the major ethnic groups in Hawai'i, as well as part-Hawaiians and pure Hawaiians. Categories compared were overall mortality, the top five mortality conditions, mortality conditions related to circulatory disease, mortality conditions relating to malignant neoplasms (cancer), percentage increases from 1980-86 to 1989-91 for the top ten causes of death, overall morbidity rates, top ten chronic conditions, cancer incidence 1988-92, behavioral risks, and women's health screening.

.M. Mor et al., Determinants of prenatal care use in Hawaii: implications for health promotion, in *American Journal of Preventative Medicine*, Vol. 11, No. 2 (Mar.-Apr 1995) at 79.

E.C. Kieffer et al., Pregnancy Outcomes of Pacific Islanders in Hawaii, in *American Journal of Epidemiology*, Vol. 141, No. 7 (April 1, 1995) at 674. This article looks at the outcomes of pure-Hawaiian mothers and Samoan mothers. Part-Hawaiian women were not studied: Women who designated themselves as part-Hawaiian were not included in this study because of the cultural, socio-economic, and genetic diversity of this much larger group in comparison with the relatively homogeneous Samoan and unmixed Hawaiian population. At 675. Uses Health Status Monitoring data.

E.C. Kieffer et al., The perinatal and infant health status of Native Hawaiians, in *American Journal of Public Health*, Vol. 84 No. 9 (Sept. 1994) at 1501. This article compares the status of children born to Caucasian, part-Hawaiian, and full-Hawaiian

mothers. Part-Hawaiian women were included for the following reason: In this analysis, the category Hawaiian includes mothers with any Hawaiian ancestry, following common practice in the state. At 1501. Uses Health Status Monitoring data.

N.E. Aluli, Prevalence of obesity in a Native Hawaiian population, in *American Journal of Clinical Nutrition*, Vol. 53, 6 Supp. (June 1991) at 1556s. This article reports the result of the Molokai Heart Study, and focuses on Hawaiian with fifty percent Hawaiian blood or more. The research is original.

C.S. Chung, Health risk behaviors and ethnicity in Hawaii, in *International Journal of Epidemiology*, Vol. 19, No. 4 (December 1990) at 1011. The study looks at demographic data for Hawaiians, Caucasians, Chinese, Filipinos, and apanese. Hawaiians and part-Hawaiian were pooled to form the Hawaiian group since these groups tend to share a common sociocultural environment. At 1012.

Cancer: the Hwaii Tumor Registry of Hawaii ran special figures for the Bureau on the prevalence of cancer in persons of Hawaiian ancestry. That information is contained in Appendix C.

Housing

SMS Research, *Department of Hawaiian Home Lands Beneficiary Needs Study, 1995* (September 1995). Number of Hawaiians in Hawaii and U.S.; number of Hawaiians with blood quantum of 50% or more; number of beneficiaries currently served by DHHL. Lists the following demographic data for DHHL applicants, DHHL lessees, and the state of Hawai'i in general: age, whether there were children in the household, employment status, marital status, type of current home, and tenancy. Lists current household size, the crowding ratio, the shelter-to-income ratio, for DHHL applicants, Hawaiians living in Hawai'i, and all ethnicities in Hawai'i. There is considerable additional data as it related to the lessees use of the land and the applicants applications.

The Urban Institute, *Housing Problems and Needs of Native Hawaiians* (1995). This study was based on a special data tabulation from the U.S. Census. It is unique among census data in that it classifies households as Hawaiian based on whether either the head of household or the spouse is Hawaiian. Figures include: Native Hawaiian and non-Hawaiian households by geographic area (1990); net migrations for Native Hawaiians by area (1985-90); age of state residents as a percentage of all persons, by Hawaiian and non-Hawaiian (1990); households by family status, by Hawaiian and non-Hawaiian (1990); households by size and tenure, by Hawaiian and non-Hawaiian (1990); presence of subfamilies, for Hawaiians and non-Hawaiians (1990); educational attainment for persons 16 or older, by Hawaiians and non-Hawaiians (1990); labor force status for Hawaiians and non-Hawaiians (1990); employment by industry, Hawaiians and non-Hawaiians (1990); income related to area median, by Hawaiians and non-Hawaiians (1989); vacancy and home ownership rates, Hawaiians and non-Hawaiians

(1990); age of housing, units in structure, and size of units, for Hawaiians and non-Hawaiians (1990); housing problems (numerous factors), Hawaiians and non-Hawaiians (1990).

Education

Note: one researcher in the education field noted that Hawaiians have a relatively high percentage of students in private schools, thanks to KSBE. When looking at general educational outcomes for Hawaiian students, private school data should be filtered out to get an accurate view of the Hawaiian DOE student experience.³⁴

Office of Program Evaluation and Planning, Kamehameha Schools Bernice Pauahi Bishop Estate, *Native Hawaiian Educational Assessment 1993*.

Educational data in tables:

- Ethnicity of DOE students 1980-81 and 1992-93
- Ethnicity by DOE district
- Native Hawaiian students in the DOE S 1983-84 through 1992-93
- Hawaiian student population, S 1992-93
- Percentile ranks on PPVT-R (standardized test) by major ethnic groups in Hawaii (1982, 1988, 1989)
- Hawaiian student performance on the PPVT-R (1983)
- Total reading percentiles for major ethnic groups (1992)
- Total reading achievement curves for major ethnic groups (1992)
- Hawaiian total reading achievement curves by grade level (1992)
- Total math percentiles for major ethnic groups (1992)
- Total math percentiles for major ethnic groups (1992)
- Total math stanine distributions for Hawaiians (1992)
- Science percentiles for major ethnic groups (1992)
- Science stanine distributions for major ethnic groups (1992) and for Hawaiians (1992)
- Social science percentiles for major ethnic groups (1992)
- Social science stanine distributions for major ethnic groups (1992) and for Hawaiians (1992)
- Total reading and total math percentiles for total DOE and Hawaiian students (1983, 1992)
- Total reading stanine distributions for 8th grade Hawaiian students (1983, 1992)
- Total math stanine distributions for 10th grade Hawaiian students (1983, 1992)
- Reading comprehension for Hawaiians in private schools (6th grade, 7th grade)

Math computations for Hawaiians in private schools (6th grade, 7th grade)
Status of DOE and Hawaiian students graduating in S 1991-92
DOE and Hawaiian Students withdrawing from school by withdrawal category (S 1991-92)
DOE students with excessive absences by ethnic group, grades 6-12 (S 1991-92) (multiple charts)
DOE students retained in grade, by ethnic background, grades K-12 (S 1991-92)
High school completion by adults 25 and older, by major ethnic group (1940-90)
Completion of four or more years of college by selected ethnic background (1940-90)
Hawaiian enrollment in UH system and projections through 2000

Other Data

Native Hawaiian births in 1990 by ethnicity of parents
Native Hawaiian marriages by ethnicity of bride and groom
Native Hawaiian and general infant mortality rates as 5-year averages (1956-90) and detailed graphs from 1980-90
Infant mortality rates for major ethnic groups in Hawaii 1989-90
Infant mortality for Hawaiian infants by maternal Hawaiian/non-Hawaiian ethnicity (1980-90)
Percent of births at low birthweight for major ethnic groups (1990) and (1950-90)
Percent of births in which prenatal care started after first trimester (1963-90)
Rate of late and no prenatal care by ethnicity (1990)
Maternal risk factors reported by women whose babies had a diagnosed birth defect (1989-91)
Hawaiian infant deaths by age of mother (1989)
Births to women under the age of 20 (1962-90)
Pregnancy rates by outcome for women 15-19
Pregnancies and births to women under age 18 and under 20 by ethnicity of mother (1990)
Births to unmarried women in Hawaii and the United States (1962-90)
Confirmed cases of abuse and neglect by ethnic group (1975-89)
Drug use, alcohol use among all DOE and DOE Hawaiian students in 12th grade (1987, 1989, and 1991)
Number of juvenile arrests, total and Hawaiian (1980-92) (also arrest rates)

Analysis

While the demographic data on Hawaiians is not complete, there is a wealth of information available. Most of the data and reports seem internally sound. However, two related problems must be highlighted when working with the data. First, some data collectors use methods of calculating Hawaiian ancestry that are unreliable. The issue of lack of a uniform definition for Hawaiians will be discussed in depth in the next chapter. The major methods, whether it be self-identification or review of ancestry, have a plausible rationale. (It should again be noted that this study does not take any position on who should be or not be classified as Hawaiian. That is not the purpose of the study, and no assumptions should be made along those lines based on anything stated in this report.)

However, a few of the state agencies use data in which Hawaiian ancestry is determined -- or not determined -- by last name and by appearance. In a state with a substantial number of multi-ethnic people, using last names is problematic, as for various reasons such as adoption and divorce, people with a Hawaiian last name may not be of Hawaiian ancestry. And as in only about one-third of the births both parents are Hawaiian,³⁵ this method can exclude those who are Hawaiian on their mother's side, but whose last name or appearance may not be typically Hawaiian. Similarly, relying on appearance, or eyeballing, is also less than accurate in a multiethnic society. Those agencies currently using such questionable tactics would be best advised to drop them in favor of, at a minimum, self-identification, and to use the category of unknown for persons who fail to specify ancestry, instead of guessing.

The second related problem is that many of the reports cannot be cross-indexed with other reports because they use different methods of determining who is Hawaiian. It is widely recognized by the researchers and demographers themselves that certain figures, such as Census and HSP/Health Survey reports, cannot be compared reliably against the other as the HSP/Health Survey reports fifty percent more Hawaiians in the State than the Census does. The demographers refer to having the same numerical base of Hawaiians, calculated the same way, as having a common denominator. Comparing information with different denominators can result in incorrect figures.

For example, the *Native Hawaiian Data Book* reports that, according to the Census, there were 89,430 Hawaiians over the age of 16 in the workforce in 1990.³⁶ A researcher trying to figure out the percentage of employed Hawaiians should not compare this figure to the total number of Hawaiians in the State as derived by the HSP, which has a higher count of Hawaiians than the Census does. If the researcher did so, comparing the number of employed Hawaiians according to the Census to a total state Hawaiian population of 205,079 according to the HSP, the researcher would come up with the percentage of employed Hawaiians of 44%, but this would be inaccurate. The researcher needs to compare the number of employed Hawaiians per the Census to the total number of Hawaiians as determined by the Census, which is a much lower figure of 138,742. Both of these numbers are derived from the Census and share the same

denominator. These figures give a true employment rate of 64%, a full twenty percentage points higher than the erroneous 44% figure.

Another area that cannot be compared with accuracy is the number of Hawaiians arrested versus the number of Hawaiians in prison. The Native Hawaiian Adult Arrest information³⁷ is obtained from the Department of the Attorney General, based on county police reports, which track ethnic identity based on either information from the arrestee, last name, or visual identification (eyeballing).³⁸ But the information on prison population is obtained from the Department of Public Safety, which is obtained through self-identification of up to three ethnic identifiers. However, when the data is coded, people who have more than one ethnic identity including Hawaiian are coded as Hawaiian only.³⁹ These two different methods can result in different counts of who is Hawaiian, as those who look Hawaiian -- but are not -- could be coded as Hawaiian for the arrest reports but not the prison reports, and those who are Hawaiian but do not look it or do not have a Hawaiian name can end up classified as something else on the arrest reports, but as Hawaiian on the prison reports.

The *Native Hawaiian Data Book* illustrates the different results that can occur, based on the different denominators. One of the most interesting results comes in its calculations of life expectancy figures.⁴⁰ The Data Book notes that choice of population data source affects life expectancy estimates and looks at estimates based on two different denominators. The 1990 life expectancy rates derived from the two sources differ by less than a year for Chinese men, Chinese women, apanese men, apanese women, and Filipino women. In sharp contrast, the life expectancy rates differ by six years for Hawaiian women, and seven years for Hawaiian men. No group varies as much as either Hawaiian group.

Unfortunately, it is all too easy for a reader not familiar with this area to compare figures without regard to what the denominators are, for even if the chart has a reference to using the term Hawaiian as defined by the U.S. Bureau of the Census, the average reader will have no idea what this means, or that it is a marker of a significant issue. The Legislature is cautioned to be aware of this issue, and to examine the sources of all Hawaiian demographic data presented to it to ensure, to the greatest extent possible, that the denominators match or at least are a close fit when comparing ethnic data across reports.

Summary

While substantial demographic data on Hawaiians exists in the areas of general demographics, health, education, economic indicators, housing, and crime, their usefulness is limited by the fact that classification or coding as to who is Hawaiian is not standardized. Most agencies use a reasonable, although different method of determination, although a few use methods that should be improved. Care must be used when drawing conclusions between different data sources to ensure that the

denominator is similar enough to make the comparisons valid. Failure to do so can lead to costly imprecision for the state planning process.

Endnotes

¹ Robert A. Hahn and Donna F. Stroup, Race and Ethnicity in Public Health Surveillance: Criteria for the Scientific Use of Social Categories, *Public Health Reports: Journal of the U.S. Public Health Service*, Vol. 109, No. 1 (Jan-Feb. 1994) at 13.

² ALU LIKE s Kokua, Ka Wai Ola 'O OHA, August 1998 at 5.

³ Brochure, ALU LIKE, Inc., Service Information Brochure (May 1998).

⁴ For example, see the reports created for the islands of Kaua'i, Lana'i, Maui, Moloka'i, and O'ahu, in the series *A Comparative Profile of Hawaiians and Part-Hawaiians and the Total Population of (Island Name)*, which were published in December 1979. This five-volume series reported data on population, sex, age, marital status, household size, relation of head of household, sex of head of household, number of dependents, residency, place of birth, citizenship, lifetime residence, residence 1 and 5 years ago, highest grade completed, high school graduation, student status, personal income, household income, family income, households below poverty line, employment status, hours worked, weeks worked, occupation, industry, weeks unemployed, unemployment in labor force, and housing characteristics relating to ownership and condition.

⁵ For example, Native Hawaiian Data from OEO 1975 Census Update Survey (1975); Profile of Hawaiians in the 1980 Decennial Census (by island, 1984); *Crime and Justice Related to Hawaiians and Part-Hawaiians in the State of Hawaii* (1981), *Criminal Justice and Hawaiians in the 1990's* (1994); *Characteristics and Health Status of Individuals Age 60 and Over Compared with the Total Population in Hawaii* (1984); *Socioeconomic Characteristics of Native Hawaiians* (1989); *Demographic, Social, and Economic Status of Native Hawaiians 1990* (1994); *Report on the Educational, Employment, and Training Needs of Native Hawaiian Youth* (1980); *Native Hawaiian Vocational Education Needs Assessment Report* (1987); *Report on Mental Health and Substance Abuse Among the Native Hawaiian Population* (1979); *E Ola Mau: The Native Hawaiian Health Needs Study* (six-volume, 1985), and others.

⁶ 42 United States Code Annotated sec. 11702 et seq., adopted on October 31, 1988, as Public Law 100-579.

⁷ 42 U.S.C.A. sec. 11703.

⁸ 42 U.S.C.A. sec. 11704(a)(3).

⁹ 42 U.S.C.A. sec. 11704(c)(1).

¹⁰ Native Hawaiian is defined as a United States citizen who is a descendant of aboriginal people, who prior to 1778, occupied and exercised sovereignty in the area that now constitutes the State of Hawaii . 42 U.S.C.A. sec. 11711(3).

¹¹ 42 U.S.C.A. sec. 117711(7).

¹² Interview with Dr. Pua Aiu, Papa Ola Lōkahi, on July 22, 1998.

¹³ Id.

¹⁴ Kamehameha Schools/Bernice Pauahi Bishop Estate, *Native Hawaiian Educational Assessment 1993* at xiii.

¹⁵ Id. at 1.

¹⁶ Public Law 100-297 (1988).

¹⁷ Interview with Neal Oyama and Tim Wong, Queen Lili'uokalani Children's Center, on June 17, 1998.

¹⁸ Interview with Mele Look, Queen's Community Health, on July 8, 1998.

¹⁹ House Concurrent Resolution No. 156, S.D. 1 (1998) at 2.

²⁰ Id. The resolution specifies that the demographic data are to include e but not be limited to the specified categories of data.

²¹ Telephone interview with Ian Nakamoto, Hawaii State Data Center, Department of Business, Economic Development, and Tourism, on October 18, 1998. The Bureau of the Census makes available summary type files, which generally contain aggregate numbers only. If the data are cross-tabulated, it is by the Bureau's own categories, not the researcher's. The Bureau also makes available public use microdata on CD-ROMs and magnetic tapes, which cover larger geographic units but can be cross-tabulated by the researcher.

²² The Bureau of the Census performs an economic census every five years, and a current population survey done annually. The current population survey only breaks down racial data into the top-tier categories, which does not include separate data on Hawaiians. Telephone interview with Ian Nakamoto, DBEDT, on October 19, 1998.

²³ Office of Hawaiian Affairs, *Native Hawaiian Data Book 1996*, Table 1.9 Geographic Distribution.

²⁴ Id.

²⁵ Free UH tuition for Hawaiians proposed, *The Honolulu Advertiser*, September 2, 1998, at B-1; UH Hawaiians renew call for free tuition, *The Honolulu Advertiser*, September 24, 1998, at B-1.

²⁶ The Bureau performed a study on this topic in 1991, in which the Bureau indicated that the planning process for such a program should take into consideration mainland Hawaiians as well as older, non-traditional students who might want to pursue or complete higher education. Sean Kadooka Mardfin, *Tuition Waivers for Hawaiian Students in Higher Education*, Legislative Reference Bureau Report No. 2, 1991.

²⁷ According to the Census Bureau, Hawaiians made up 3% of the Asian/Pacific Islanders group, so their data was swamped by that of other ethnicities. In contrast, in the new Native Hawaiian/Pacific Islanders group, Hawaiians will make up about 60% of the respondents, and the overall statistics from the NH/PI group will more closely resemble the Hawaiian population. Notice of Decision, Office of Management and Budget (included in Appendix D) at 8.

²⁸ See, e.g., Philip Tajitsu Nash, Will the Census Go Multiracial *Amerasia Journal*, Vol. 23, No. 1 (1997), published by the UCLA Asian American Studies Center 17, 23. Briefly summarized, people who testified on amending Directive 15 to allow multiracial coding favored it because the current system is imprecise; forcing a person to select only one denies recognition of their full heritage and demeans their existence with the label "other"; and forces the person to provide factually false information. People who opposed multiracial coding included agencies and organizations concerned that this will reduce the count in their own group's numbers and will jeopardize hard-won gains in civil rights, education, and electoral arenas.

²⁹ Telephone interview with Claudette Bennett, Racial Statistics Branch, Census Bureau, December 4, 1998.

³⁰ See, e.g., Imua: to Achieve Goals, Hawaiians Need Better Education, *The Honolulu Advertiser*, Sunday, September 13, 1998, at B-4.

³¹ David Johnson, *Social Process in Hawaii* at 57.

³² KSBE, *Native Hawaiian Educational Assessment 1993*, at 12.

³³ Richard Kekuni Blaisdell, The Health Status of Kanaka Maoli, in *Asian American and Pacific Islander Journal of Health*, Vol. 1, No. 2 (Autumn 1993) at 123 (emphasis added).

³⁴ Telephone interview with Ormond Hammond, PREL, July 24, 1998.

³⁵ *Native Hawaiian Educational Assessment 1993* at 13. The graph shows that in 1990, in only 33.9% of Hawaiian births were both parents Hawaiian. In the other two-thirds, one parent was not Hawaiian, although the chart does not specify whether the non-Hawaiian parent was the mother or the father.

³⁶ *Native Hawaiian Data Book 1996*, Table 8.23, at 508.

³⁷ *Id.*, Tables 7.5 and 7.7 at 422 and 426.

³⁸ *Id.* at 553.

³⁹ *Id.* at 552.

⁴⁰ *Id.*, Table 6.44, at 360.

Chapter 4

THE FUTURE OF HAWAIIAN DATA COLLECTION

The racial and ethnic categories set forth in the [Census] standards should not be interpreted as being primarily biological or genetic in reference. Race and ethnicity may be thought of in terms of social and cultural characteristics as well as ancestry. . . . Respect for individual dignity should guide the processes and methods for collecting data on race and ethnicity; ideally, respondent self-identification should be facilitated to the greatest extent possible[.]¹

Assessment of Current System and Suggestions for Improvement

Although Hawai'i is a much more culturally and ethnically accepting place than most, discussions about race and ethnicity are difficult to discuss dispassionately. This study does not, in any way, attempt to define who is Hawaiian, or what it means to be Hawaiian, or to include or exclude anyone from the Hawaiian community. Those issues should be left to the Hawaiian community. However, the State, with its obligations to all the people it serves, along with its special obligation to Hawaiians, does need some method of identifying Hawaiians and deriving important demographic data about them. The demographic data will not be totally accurate for Hawaiians, as the data is not totally accurate for any ethnic group in Hawai'i. The discussion in this chapter about the best ways of counting Hawaiians has to do with the State needs, not with who belongs or does not belong in the Hawaiian community. This premise underlies this entire report.

Why do we measure demographic data? Because we think that it will tell us something significant about the people we measure. The function of the State is to provide certain resources that individuals cannot provide for themselves (e.g., water systems, highway systems, public education, crime prevention, justice). The State should not merely be responsive to existing needs, but it should actively seek out ways of helping residents by preventing, resolving, or encouraging future events in areas under its jurisdiction -- crime, public health, public safety, education. To do so, the State needs to plan for the future. These plans must have some kind of basis to predict future needs.

Demographic data is one important method the State can use to predict future needs. Information about the population -- how many of us there are, where we live, how we do in school, what kinds of health problems we are most susceptible to -- helps assess current and future needs.

The State collects demographic data about all its citizens. However, there has been a stronger focus on Hawaiians. Part of this reason has undoubtedly been that the

State has a special relationship to Hawaiians through the Hawaiian Homes Commission Act. There is also a recognition that Hawaiians, the original settlers of these islands, welcomed the introduction of Western civilization, with costly consequences to them in terms of disease, unhealthy lifestyle changes, and termination of their pre-contact culture and values. There appears to be a concern by the State that Hawaiians, who appear at the bottom of many demographic categories, be assisted in obtaining a better, healthier, economically more productive lifestyle. While some Mainland scholars have argued that classification by race should be abandoned in general, there is a consensus, particularly in Hawai'i, that it is necessary to identify and collect data on groups traditionally defined as separate races.² This is particularly true in the health field,³ as has been noted by Hawai'i demographers.⁴

That being said, the unique way we collect Hawaiian data in this State bears some reexamination. Unlike most if not all ethnic groups in Hawai'i, the vast majority of Hawaiians are of mixed ethnicity. Yet for the most part, in terms of classification, they are labeled as though they are one homogenous entity, all of whom identify primarily as being Hawaiian. One study on ethnic identity among mixed-ethnic students in Hawai'i⁵ noted that in general, ethnic identity is subjective, not objective; it can be inconsistent with genetic heritage and cultural membership; and it can change in different situations or over the course of a lifetime.⁶ Specifically, in the group studied, only 11 percent of the subjects chose one ethnic identity and used it consistently throughout the survey; the rest listed different identities depending on the situation.⁷ The check-one-box school of ethnic identification is becoming increasingly remote from the way in which people are by blood, and how they identify themselves.

The fluidity of ethnic identity among Hawaiians is generally acknowledged by demographers and researchers in the area. One study notes that as there are so few full Hawaiians left, self-identification (rather than genetic heritage alone) is the way in which most people who label themselves as Hawaiian do so, and that consequently, it must be understood that some whites or Filipinos in this study may have more Hawaiian ancestry than some self-designated Hawaiians. This is a fact of life, and provides ongoing debate among native Hawaiians themselves.⁸ But while this fact of life is noted and understood by those performing these studies, it is not clear that it is understood by those using the studies.

It may be that by labeling all who have any amount of Hawaiian blood as Hawaiian, regardless of their expressed preferences, we are creating a class of genetic Hawaiians who are not the same as cultural Hawaiians. Whether this is good, bad, or neutral will depend on the use of the information.

The fact that people of multi-ethnic backgrounds in general, and Hawaiians in particular, are flexible about their ethnic identities has been demonstrated by comparing demographic data over time. As early as 1937, one demographer noted that part-Hawaiians exercised considerable leeway in reporting their ethnic identities, noting that dark part-Hawaiians tended to classify themselves as pure Hawaiians, and mixed Asian-white-Hawaiians sometimes tended to drop the Asian and report

themselves as Hawaiian-white only.⁹ The Urban Institute¹⁰ examined figures for Hawaiians from the 1960, 1970, and 1980 Censuses, and noted that the Hawaiian population appeared to shrink drastically between 1960 and 1970, falling from over 100,000 to about 70,000 (the so-called paper genocide referred to in the preceding chapter). The Hawaiian population then appeared to undergo an incredible rebound in 1980, rising from 70,000 to about 115,000 in only ten years. The report says that this rapid growth exceeds plausible natural increase and must reflect, in part, a greater likelihood to report Native Hawaiian racial identity by part-Hawaiians[.] This observation is corroborated comparing the number of Native Hawaiians by age distribution for 1970 and 1980: there were more Hawaiians in each birth group in the 1980s, not just for those ten and under.¹¹

As stated in chapter 3, in prior years the United States Census had allowed an individual to select only one ethnic group, and many part-Hawaiians had chosen to select a non-Hawaiian facet of their multi-cultural identity. But the State of Hawaii, through the Department of Health's longstanding HSP/Health Survey, has rejected the self-identification route, and instead uses an examination of the ethnic background of each of the individual's parents. After an ethnic code is collected on each person that can range, for a multi-ethnic person, of up to four ethnic identities, the person is coded according to a set series of steps into just one ethnic identity. While at first glance this looks more useful than the Census method, in 1980 one astute commentator noted: These rules, although useful in sorting people into convenient statistical groups, are obviously quite arbitrary, and under conditions of extensive crossing of racial lines can result in great confusion.¹² In 1998, we are almost twenty years further into extensive ethnic mixing in Hawai'i, and the confusion is even greater.

The State has established a specific set of rules for coding the ethnic identity of multi-ethnic residents. While classification of Hawaiians has been discussed, classification of other ethnic backgrounds bears a closer look. A person with mixed white and non-white blood is coded as the non-white ethnicity only. This reflects the extent to which American cultural biases shaped the system, and is probably a relic of America's slave-holding past when one drop of black blood was considered to taint otherwise mostly white people and cause them to be labeled as black (also called the rule of hypodescent).¹³ There is really no rational basis for this categorization; logically speaking, a person is genetically the most similar to the person's dominant ethnic group, and a person of mostly white ancestry should be categorized as white. But it is the common practice in both the United States and the State of Hawai'i to categorize such a person as the person's non-white ethnicity.

If a person is of mixed non-white ethnicities, the Department of Health next looks to what type of non-white ethnicities the person has. If none of them is black or Hawaiian, the person is coded as the first ethnicity listed. However, if the person is part-black, the one drop rule comes into effect, and the person is categorized as black, even if that is not the person's dominant ethnic group.

What is very interesting is that in Hawai'i, the Hawaiian ethnicity takes precedence over the black one, so that a person who is part-black and part-Hawaiian will be classified as Hawaiian, even if the person is three-fourths or more black. The American one-drop rule was implemented to keep blacks in their place, and the ugly epithet of passing was applied to those mostly-white people who were visually similar to whites and who wanted to join white society as an equal. But the one drop rule historically was meant negatively, to deny part-blacks the benefits associated with white society. But the Hawaiian one drop rule has been used positively, historically first to give part-Hawaiians the same social status as full-blooded Hawaiians who were at that time the dominant ethnic group, and later, to assist part-Hawaiians to obtain entitlements and participate in programs intended to benefit Hawaiians.

In researching this study, a few suggested that Hawaiians establish a tribal roll, similar to the ones used by many Native American tribes. For those tribes, only those with a certain proven minimum amount of blood from that tribe may be enrolled and considered a member of the tribe. One demographer noted that the application of the one drop rule for Hawaiian causes friction at the federal level with federal legislators who are used to the strict blood quantum requirements of many Native American tribes, but that he personally thinks that the one-drop rule works for Hawai'i.¹⁴ The belief that the Hawai'i system ain't broke and works for Hawai'i was echoed by many. But while no one in the State suggested setting a minimum blood quantum requirement for being considered Hawaiian, some wonder why there is no complete listing of Hawaiians.

Part of the historical answer may lie in the fact that compared to the elaborate oral genealogy that early Hawaiians could recite, a bare listing of names of Hawaiians, without ancestry, held no appeal for Hawaiians, and so no list was ever compiled. Another part of the answer may lie in the historic treatment of outsiders by the Hawaiian people.¹⁵ The Hawaiians have always been an inclusive society, even in the times when they were the rulers of this land.¹⁶ From an early time, Hawaiian men and women of mixed ancestry held positions of dignity and power,¹⁷ and were accepted into Hawaiian society as equals. For example, both Queen Emma, consort of Kamehameha IV, and Princess Ka iulani, heir of Queen Lili'uokalani, were part-Hawaiian and part-white. Part-Hawaiians were allowed to become numerous, influential, wealthy, and well-connected.¹⁸ The blacks had the one-drop rule thrust on them; the Hawaiians embraced it. The Hawaiians did not segregate their mixed-race cousins the way in which white Americans historically segregated their part-white ones. It may be that this sense of inclusiveness is a very real reason behind the longstanding DOH position that every person with Hawaiian blood be classified as such, and may also be a reason that Hawaiians, integrated into every level of society, regardless of blood quantum, did not feel the need to make a roster of their members.

Why do we not establish such a list today? It could be quite useful to state agencies and private researchers alike. Hawaiians applying for entitlements or for programs established for their benefit would not have to produce documents over and over again to prove their right to participate. But privacy is one issue; a few researchers

stated that there might be concerns at the idea of one database listing all the Hawaiians, and how it might be used. The DOH suggested that such a database would eventually contain most of the population of Hawai'i due to inter-marriage, which could expand the privacy issue to the whole population.¹⁹ Another issue is how Hawaiian identity would be proved for such a database. Apparently there are people of Hawaiian blood whose birth certificates do not so state because in an earlier generation, a Hawaiian ancestor chose to drop the Hawaiian identity from an offspring's birth record. These people can apply to the Vital Statistics office of the DOH to have these earlier birth records corrected -- if they can find other proof that the ancestor was Hawaiian. Conversely, the DOH reports that some parents who are not Hawaiian are putting down Hawaiian as an ethnic identity for their newborn babies in the hope of someday qualifying that child to attend Kamehameha Schools. As there has not at this time been discovered a biological or genetic marker for Hawaiian heritage, there is no easy resolution to the issue of proving Hawaiian identity for this type of database. One further reason that a database of Hawaiians is not being made today may be a problem in agreeing on which entity would hold that information. DOH, OHA, and ALU LIKE have been suggested as possible alternatives for a Hawaiian population database, but there is no consensus on this issue.

In 1990, the Legislature established a Hawaiian Genealogy Project Inter-Agency Task Force to develop a plan for a Hawaiian genealogy project to allow Hawaiians greater and easier access to genealogical information.²⁰ The task force presented its report to the 1991 Regular Session of the Legislature and recommended that primary records (birth, death, and marriage) be automated; one-stop genealogical services centers be implemented; and secondary sources of genealogical information be made more accessible. The automation of primary records and their placement into a proposed Hawaii Population Database would be able to generate a person's pedigree, and would have been of great assistance to Hawaiians needing proof of ancestry to qualify themselves for entitlements and benefits. Unfortunately, it does not appear that this report, the *Hawaiian Genealogy Project Master Plan*, was funded and followed through.

While the state classification scheme, which gives priority to any amount, however small, of Hawaiian blood, is an effective tool for determining who has any amount of Hawaiian blood, it largely neglects people of mixed, non-Hawaiian ethnicity. The mixed, non-Hawaiian ethnic population in the State is quite large: in 1996 it was estimated at 238,371, just slightly larger than the mixed Hawaiian/Part-Hawaiian category (which is overwhelmingly mixed itself) of 237,128.²¹ Generally, if a person is part-white and part non-white, the person is classified as the non-white identity, and if the person is mixed but not white, the person is classified as the person's father's identity (or the first ethnicity listed for the father, if more than one exists). Apparently no discretion is allowed in the coding, so that someone with a Japanese mother and a Filipino-Chinese father would be classified as Filipino, even though the person is more Japanese than anything else.

This system for coding is imprecise, but at least it is preferable to those few state agencies that use the mixed/other classification for people of mixed, non-Hawaiian ethnicity. There is very little that this type of classification can do for planning for mixed groups, and it has unfortunate tendencies to exaggerate Hawaiian demographic data in ways that are not helpful to the planning process. For example, in reviewing the statistics of ethnicities of people in prison,²² the following statistics appear to apply (in order of predominance):

Hawaiian:	37.8%
Caucasian:	21.2%
Other:	16.3%
Filipino:	8.4%
Samoaan:	5.4%
Black	5.2%
Japanese:	3.7%
Chinese:	0.9%
Korean:	0.6%
Unknown:	0.5%

These statistics make Hawaiians look bad and ethnicities such as Chinese and Japanese look good. But what is being compared here? The Hawaiian category includes both full and part-Hawaiians, but every other ethnic group is counted by its full-blooded members only. The third highest category of prison inmates is the other category, which is composed of persons of mixed ancestry, Hispanic, and other Asian and Pacific Islanders.²³ (emphasis added) This leads to undercounts of the rest of the ethnic groups, as their mixed-ethnic members are blended into the large other category. To skew the figures even more, their mixed-ethnic members who are also part-Hawaiian are classified as Hawaiian. So for instance, if three men of Chinese ancestry are admitted to prison, with one being full-blooded Chinese, one Chinese-white, and one Chinese-Hawaiian, only the full-blooded Chinese will count toward the Chinese prison population statistics; the second man will go into the other category, and the third will go into the Hawaiian category. The Chinese statistics (and the statistics of every other ethnic group) will therefore look better than they actually are, in part at the expense of making the Hawaiians look worse.

People who are part-Hawaiian are excluded from classification as one of their other ethnicities under this model. It could be that the number of Chinese in Hawai'i would jump dramatically if we reclassified the numerous Chinese-Hawaiians as Chinese instead of Hawaiian, for example, but our demographic bias keeps them counted as Hawaiians only. The numbers of people who could be excluded from being classified as Hawaiian under a revised scheme that would not give such predominance

to Hawaiian heritage might be great, as Hawaiians out-marry at a high rate: of the births in 1990, both parents were Hawaiian ancestry in only 33.9 percent of the births.²⁴

Not all the demographic data is as graphically skewed as the prison example, but this does demonstrate part of the drawback of classification schemes that use the Hawaiian-default method of classification. The U.S. Census method has been criticized for its undercounting of Hawaiians, but the Census methodology does have the advantage of allowing self-classification, which is considered a valid classification scheme by some demographers.²⁵ While people of multi-ethnic backgrounds will still be coded as only one ethnic identity, at least they are able to choose the ethnicity with which they are to be labeled. For some planning purposes, the ethnic identity with which a person most closely identifies may be more important than the person's dominant genetic identity, or searching the person's roots for the smallest trace of Hawaiian identity.²⁶ The acting chief of the Office of Health Status Monitoring has stated, that perhaps the high morbidity rates and mortality rates for part-Hawaiians, and the even higher rates for full-blooded Hawaiians, are due to cultural or socio-economic factors.²⁷ If that is so, then asking people whom they identify with may be a more accurate method of collecting demographic data, to the extent that it can be said that people tend to practice the culture of the ethnic group they identify with.

The demographers interviewed for this study were asked whether defining who should be considered Hawaiian should be standardized, so that data collected by researchers in different fields -- economics, health, education, criminal justice, housing, employment -- could be more readily compared.

Positions were taken on both sides of this issue by the private demographers and researchers. Some clearly saw the usefulness of a standard definition that would enable data to be used across categories. Standardization also appears to be the norm among demographers in general.²⁸ The United States Office of Management and Budget has made it clear that all federal offices should use the standard Census definitions of ethnicity and race so that the federal data will be compatible, stating:²⁹

To the extent practicable, the concepts and terminology should reflect clear and generally understood definitions that can achieve broad public acceptance. To assure they are reliable, meaningful, and understood by respondents and observers, the racial and ethnic categories set forth in the standard should be developed using appropriate scientific methodologies, including the social sciences. . . . The racial and ethnic categories should be comprehensive in coverage and produce compatible, non-duplicative, exchangeable data across Federal agencies. (emphasis added)

However, some researchers in the State were more concerned with having a definition that best suited the nature of what they were studying, which may at times not be compatible with any given standard. One demographer commented that she

liked having two different data sources, as it gives her a different snapshot of the Hawaiian community: one of all those with Hawaiian blood, and one of those who primarily identify as such. She said that as long as people do not cross-compare the two sets of figures, having different sets of data is not a problem, but did acknowledge that such cross-comparisons do often occur.

So is standardization the answer? At first blush, the answer would appear to be yes, of course. The Hawaiian community itself, not only the State, lacks sufficient information about its own numbers for planning purposes. As one report from Kamehameha Schools/Bishop Estate notes, questions such as how many Hawaiians are there? What percentage of the school-age population is Hawaiian? and Where does most of the Hawaiian population live? along with other basic demographic questions are very difficult to answer because there is no one universally accepted definition of Native Hawaiian.³⁰ The Department of Health itself notes this: If having data by ethnicity continues to be important for us, researchers and policy makers should come to consensus about how ethnic data are collected and coded.³¹

However, one problem with standardization is that, by definition, it sets out one method of categorization that may prove Procrustean, lopping off relevant information and leading to its own set of inaccuracies. As long as these inaccuracies are acknowledged, this still may be the preferable method for the time being, but the continuing trend in Hawai'i of multiple ethnic births may require re-examination of this issue a generation down the line so that the numbers will reflect reality, rather than imposing a static and inaccurate mask on a dynamic and changing situation.

If standardization is to be imposed, at least among the state agencies, the next question is what that standard will be. The purpose for which the demographic data is to be used may have a bearing on how the data should be collected. For example, for entitlement programs, which are intended to benefit everyone of Hawaiian ethnicity to make up for past wrongs, data should be collected on everyone of Hawaiian ancestry, so that planning to fund and administer these entitlements can be as accurate as possible. But it may be that for health studies, it may be more accurate to measure people according to the ethnic group they identify most closely with. Morbidity and mortality statistics for full-blooded Hawaiians are far worse than for those of part-Hawaiians. Whether the difference is based on genetics, culture, socio-economic status, or some other consideration, the fact remains that part-Hawaiians are in general far healthier than Hawaiians. When their statistics are added to those of full-Hawaiians, the overall health picture for Hawaiians looks better, as the more numerous, comparatively healthier part-Hawaiians bring the numbers up. Perhaps if those who have Hawaiian blood but prefer to identify themselves with a different facet of their heritage and follow other cultural paths were allowed to exclude themselves from being classified as Hawaiian, we would have a better idea of the health status of those who identify themselves, culturally and genetically, as Hawaiians.

If the State decides to collect data on all genetic Hawaiians, however, the Health Survey method is the most inclusive. The problem with making that the standard is

that it is not realistic to expect that other state agencies will be able to take the time to track a person's parents' ancestries to determine the person's own classification. Yet there will probably be a great hue and cry from the health community if the Health Survey method changes from examination of ancestry to self-identification, as that would make comparison to past data impossible.

In lieu of that, one feasible alternative seems to be strict self-identification, with those who refuse to identify themselves being placed into an "other" category, and not arbitrarily shunted into a named category by father's racial background or any other device. To the extent that multi-ethnic people refuse to identify themselves, that in itself may be a significant demographic datum. The State may prefer to have each person nicely pigeonholed so their system looks complete, but when planners, demographers, and researchers look at that data, they may find it more useful to have firmer categories of classification.

The other feasible option may be to adopt a system similar to the one proposed for the year 2000 Census. The United States Census is planning to use a two-tier system to identify ethnicity that may be of interest to Hawai'i at the state level, once the system has been finalized. The Census will use a two-tier system. On the lower tier, numerous ethnicities are listed, and the respondent can select as many as apply. The Census will then apply an algorithm that will reduce these multiple-ethnic people to one of the five primary tier categories (Asian, black, Hawaiian/Pacific Islander, Native Alaskan/Native American, and white). The advantage of this system is that it would allow multi-ethnic people to have their ethnicities tabulated, so that the data could be run for multi-ethnic persons of any single or multiple combination (e.g., the part-Japanese, the Chinese-Hawaiians), which would greatly improve the statistics for them. The only problem is that, at the time this report was prepared, no one in the Census knew, or if they knew, were not revealing, how the second tier data was going to be collapsed to produce the first tier statistics. This is a major obstacle in recommending the Census method at this time. However, once the formula for collapsing the tiers is made known, the State may look into using such a format for its own residents.

The Census model -- once the issue of how to collapse the matrix is resolved -- may be a very valuable tool for Hawai'i's demographers. An additional value to the new Census system is that it will allow access to the backgrounds of multi-ethnic people who are not part-Hawaiian, a demographic group that has been largely ignored. The Census will lose the value that it had for some demographers in seeing how many people of Hawaiian ancestry identified primarily with that ancestry. The DOH has stated that it has added that question to the Hawaii Health Survey questions, so that information should still be available as long as the DOH keeps its present format.

Whatever the method chosen, the State will need to re-assess its utility in ensuing years, as the Hawaiian population grows increasingly large and more diluted. The only study³² the Bureau was able to locate that gave Hawaiian population estimates into the future produced the following figures (the first table assumes a 45 percent outmarriage rate, and the second table a 60 percent outmarriage rate):

Hawaiian Population Estimates (45% outmarriage) 1984 - 2044		
	Hawaiians with at least 1/8 blood quantum	Hawaiians with less than 1/8 blood quantum
1984	207,214	0
1989	233,579	4,657
2004	318,588	20,379
2024	444,642	58,262
2044	569,821	123,938

Hawaiian Population Estimates (60% outmarriage) 1984 - 2044		
	Hawaiians with at least 1/8 blood quantum	Hawaiians with less than 1/8 blood quantum
1984	207,214	0
1989	235,809	6,210
2004	328,120	27,172
2024	464,726	86,963
2044	591,191	197,853

These figures seem somewhat high; the 1989 Hawaiian population projections were 238,236 (for 45 percent outmarriage) and 242,019 (for 60 percent outmarriage, while the actual HSP/Health Survey numbers for 1989 were only 205,079.³³ Still, even if a little high, these numbers illustrate the explosive growth of the Hawaiian population and the increasingly diluted blood quantum. The study also contains a projected breakdown by blood quantum for Hawaiians of 1/8th or greater blood quantum (no such breakdown was provided for those with less than 1/8th):

Blood Quantum Distribution for Hawaiians with 1/8 th or More Blood Quantum					
	1984	1989	2004	2024	2044
Full blood	3.7%	2.99%	1.59%	0.56%	0.15%
3/4 to Full	7.69%	6.81%	4.81%	2.81%	1.3%
1/2 to 3/4	27.23%	25.06%	19.84%	13.39%	7.54%
1/4 to 1/2	39.27%	40.72%	44.2%	42.83%	37.80%
1/8 to 1/4	22.11%	24.41%	29.54%	40.41%	53.2%

These figures show the precipitous decline of the full-blooded population and the inexorable rise of the lower quantum amounts.

Conclusion

The philosophical questions raised in this chapter have no easy answers. But bringing the discussion back to a practical level, there are some things, even in an imperfect world, that can be done to allow Hawai'i to improve its demographic data collection for Hawaiians. The demographers interviewed for this study were asked this question, and some of the following key issues recurred:

- (1) **Consider reinstating the format of the original Health Surveillance Program.** The demographers were almost unanimous in their preference for the original format. Under the original format, more households were surveyed, more questions asked, and the surveys were done in person, not on the phone. Two of the most important factors that were lost were the in-person surveys and the depth of the questions. The demographers insist that the in-person survey is much more effective than a telephone survey in getting detailed and accurate responses. Apparently some health questions have been dropped, so that previously collected data cannot be carried forward. Last, there is some dispute as to the size of the sample. The demographers assert that it is far smaller (and thus not as accurate), while the DOH insists that the sample size, which had been smaller when the survey was reinstated in 1996, is approximately the same as it was in its original format.

The health data collected by the Hawaii Health Survey/Health Surveillance Program is extremely important, and it is collected on every major ethnic group in the State, not just the Hawaiians. One researcher said that it should be done, in the original format, at least every five years, although he noted that it could be done annually for not more than the cost of doing it every five years, due to the high cost of creating the sample frame, which is a one-time cost, as long as it is maintained.³⁴

If the survey is taken back to its original format, it needs to be properly funded so that the data can be collected and the results coded rapidly. Toward the end of the original Health Surveillance Program, the budget was cut so much that staff was sharply reduced, and it was taking one year to collect the data and another year to code it, so that the data when released were already two years outdated.³⁵ Even in its new format, the DOH reports that the program is understaffed and that two additional positions are needed to turn the data around in a timely manner.³⁶

- (2) **Consider spreading the financial burden of state data collection between all state agencies.** According to Dr. Alvin Onaka, state registrar and acting chief of the office of health status monitoring, all state agencies use the demographic data collected by the DOH, yet DOH shoulders the

whole burden of data collection. Dr. Onaka and some demographers agreed that data collection should be a total state effort. This would mean greater funding for staff. As it is now, state agencies that wish to add questions to the Health Survey must pay an additional amount to have that question added to the Survey, but that amount is not determined by the DOH and does not go to the DOH. The fees for additional questions are set by the private contractor (at the time this study was prepared, SMS Research), and go directly to the contractor. The fee thus pays for the cost of asking the question, but not interpreting the responses, coding them, and preparing the report, which is done by DOH staff. Additional funding should be directed to the DOH to enable it to handle the workload in a timely manner.

- (3) **Consider standardization of data collection among state government agencies.** While the State cannot control what private demographers and researchers may do, the State has control over its own demographic classifications. To the greatest extent possible, all state agencies should follow a standard set of classifications for all ethnic groups. This set of classifications should not include classification by last name or by eyeballing. Persons who do not want to contribute this information should be classified as other, not just lumped into a category willy-nilly for purposes of superficial tidiness that are not substantively correct.
- (4) **Consider privatization of collection and reporting of Hawaiian data.** Since Hawaiian data is collected and used by private entities as well as public ones, it may be appropriate to spin off data reporting to the private sector. It is beyond the scope of this study to examine all issues relating to privatization. Privatization should only occur after a thorough study is undertaken and determination made that privatization is practicable and advantageous to all concerned. However, given the lack of state funding, privatization may prove to be a win-win solution when all aspects are studied. If privatization is seriously considered, ALU LIKE is one organization that may have the expertise and willingness to take over this function with sufficient funding. The concept of involving private agencies in demographic data collection is not new; as demonstrated in the previous chapter, many private agencies are already collecting and processing Hawaiian demographic data. The DOH already uses a private agency to perform its data collection for the Hawaii Health Survey. Privatization of data collection and reporting would allow standardization of data collection that is not presently occurring.
- (5) **Consider turning over Hawaiian data collection and programs to the Hawaiian community.** This suggestion did not come from the demographers interviewed for this study. While turning over Hawaiian entitlement programs to the Hawaiian community was a controversial suggestion made during the 1998 legislative session, it bears a more

dispassionate examination. One of the reasons the State needs this data is because it administers programs benefiting Hawaiians. However, if the state Hawaiian entitlement and benefit programs were to be turned over to the Hawaiian community, it would then be the responsibility of that group, not the State, to determine how to count Hawaiians and how to distribute the entitlements and the benefits. One of the main purposes of gathering the demographic data is to ensure that planning for distribution of assets and benefits can be accomplished. Perhaps the question of how to count Hawaiians -- by self-identification or by blood -- and how to distribute finite assets to a fast-growing though increasingly diluted population -- should be left to the Hawaiians to decide. While the State would still need to collect some demographic data, the bulk of collection and reporting could be done by the people who are to be directly affected. While this idea would surely need to be pondered and subject to much discussion by the Hawaiian and the general communities, it may be a practical answer to an increasingly genetically diverse population.

Endnotes

¹ United States, Office of Management and Budget, Revision to the Standards for the Classification of Federal Data on Race and Ethnicity, at 2 (found on the Internet at <http://www.whitehouse.gov/WH/EOP/OMB/html/fedreg/Ombdir15.html>)

² Nampeo R. McKenny and Claudette E. Bennett, Issues Regarding Race and Ethnicity: the Census Bureau Experience, *Public Health Reports: Journal of the U.S. Public Health Service*, Vol. 109, No. 1 (Jan-Feb. 1994) at 23.

³ E.g., Robert A. Hahn and Donna F. Stroup, Race and Ethnicity in Public Health Surveillance Criteria for the Scientific Use of Social Categories, *id.*, at 8: Collection of race and ethnic information is a critical component of any public health surveillance system used to address differences in health status among population subgroups.

⁴ Legislators and funding agencies often ask why there is a need to gather data on Native Hawaiians if control of the major CVD (cardiovascular disease) risk factors is already emphasized in clinical practice for Hawaii's multiethnic population. The answer lies in the disproportionately high prevalence of heart disease morbidity and mortality among Hawaiians. More important, accurate information will provide funding bodies and health agencies with data on which to target their education and awareness programs to prevent the development in future generations of Hawaiians. The Native Hawaiian Health Research Project, Diabetes Mellitus and Heart Disease Risk Factors in Hawaiians, in *Hawaii Medical Journal*, Vol. 53 (December 1994) at 340.

⁵ Cookie White Stephan, Ethnic Identity Among Mixed-Heritage People in Hawaii, *Symbolic Interaction*, Vol. 14, No. 3 at 261 (1991).

⁶ *Id.* at 261-62.

⁷ *Id.* at 267. While The survey respondents explained their ethnic identity primarily based on cultural exposure, the study took the position that cultural exposure, although strongly associated with

ethnic identity, is not by itself either sufficient or necessary. The researcher noted that negative or weak cultural exposure can cause decreased or no identification with a particular group, and high status of the group, physical resemblance to members of the group, and acceptance by the group also played a role in determining ethnic identity. *Id.* at 272-73.

⁸ Herbert Barringer and Patricia O Hagan, *Socioeconomic Characteristics of Native Hawaiians*, ALU LIKE (May 1989) at 9-10.

⁹ Romanzo Adams, *Interracial Marriage in Hawaii* (New York: MacMillan 1937) at 229. Note that in the early part of this century, the Territorial Government classified part-Hawaiians as Caucasian-Hawaiians and Asiatic-Hawaiians (meaning Hawaiians with any amount of Asian blood). It was not until the 1940s that these categories were collapsed into one part-Hawaiian category. Andrew Lind, *Hawaii's People* (4th ed. 1980) at 25.

¹⁰ The Urban Institute, *Housing Problems and Needs of Native Hawaiians* (1995) at 8.

¹¹ *Id.* at 9, fn. 4.

¹² Lind at 27.

¹³ See, e.g., G. Reginald Daniel, Black and White Identity in the New Millennium: Unsevering the Ties that Bind, in *The Multiracial Experience: Racial Borders as the New Frontier* (Maria Root, ed.) (SAGE Publications 1996): The rule of hypodescent (one drop rule) causes African ancestry . . . [to be] passed on in perpetuity as a means of socially identifying *all* future offspring as black, and thus it precludes any choice in self-identification. at 130.

¹⁴ Telephone interview with Ormond Hammond, PREL, on July 24, 1998.

¹⁵ Part of the answer may also lie in the fact that the Hawaiians had a system of elaborate, memorized genealogies, and saw no cultural value in a written roster of names without the family history.

¹⁶ See, e.g., Mary Kawena Pukui et al., *Nānā I Ke Kumu II* (1972) at 91, 210 (Hawaiians thought haole foreigners had high mana and allowed and sent their daughters to sleep with them to have high mana children), Romanzo Adams, *Interracial Marriage in Hawaii* at 47-48 (New York: MacMillan 1937) (Hawaiians isolation kept them free from the traditional bias antagonistic to other races; King Kamehameha I elevated his haole advisors and gave them Hawaiian wives; interracial marriage was looked on favorably, starting at the ali'i level, with the King's approval); Sara Crosby Spang, *Hawaiian Experience and Reality: A Study of Cultural Realities* (1982) (an accepted Ph.D thesis submitted to Temple University) at 44.

¹⁷ Adams at 60.

¹⁸ *Id.*

¹⁹ Interview with Dr. Alvin Onaka and Brian Horiuchi, Department of Health, Office of Health Status Monitoring, on August 4, 1998.

²⁰ Act 56, Session Laws of Hawaii 1990.

²¹ DBEDT, *The State of Hawaii Data Book 1997*, Table 1.29, at 43. This gives a combined Hawaiian/Part-Hawaiian/Other Mixed total of 475,499, or just over 41% of the state population total.

²² OHA, *Native Hawaiian Data Book 1996*, table 7.15 at 442 (data covers fiscal year 1993-94).

²³ *Id.*

²⁴ Office of Program Evaluation and Planning, Kamehameha Schools Bernice Pauahi Bishop Estate, *Native Hawaiian Educational Assessment 1993* at 13. In the rest of the births, one parent was Hawaiian and one Caucasian in 13.6%; one parent was Hawaiian and one Filipino in 15.5%, and one parent was Hawaiian and one Japanese in 10.2%. In the remaining 26.8% of the births, the other parent was other or unknown.

²⁵ Nampeo R. McKenney and Claudette E. Bennett, Issues Regarding Race and Ethnicity: the Census Bureau Experience, *Public Health Reports: Journal of the U.S. Public Health Service*, Vol. 109, No. 1 (Jan-Feb. 1994) at 19: Self-identification generally is the most socially-accepted way of adequately collecting representative data on racial and ethnic populations.

²⁶ As a matter of fact, we do not know that ancestry is necessarily more important than self-identity in defining ethnicity. The opposite could very well be true, and may in any case be closer to a sociological definition of ethnicity. Herbert Barringer and Patricia O Hagan, *Socioeconomic Characteristics of Native Hawaiians*, ALU LIKE (May 1989) at 9.

²⁷ Interview with Dr. Alvin Onaka and Brian Horiuchi, Department of Health, Office of HealthStatus Monitoring, on August 4, 1998.

²⁸ See, e.g., Robert A. Hahn and Donna F. Stroup, Race and Ethnicity in Public Health Surveillance Criteria for the Scientific Use of Social Categories, *Public Health Reports: Journal of the U.S. Public Health Service*, Vol. 109, No. 1 (Jan-Feb. 1994) at 8: Because national surveillance relies upon information from multiple sources, the use of commensurate categories, compatibly defined and collected among different agencies, is critical.

²⁹ United States, Office of Budget and Management, Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity at 2 (found on the Internet at <http://www.whitehouse.gov/WH/EOP/OMB/html/fedreg/Ombdir15.html>) and contained in Appendix D.

³⁰ Office of Program Evaluation and Planning, Kamehameha Schools Bernice Pauahi Bishop Estate, *Native Hawaiian Educational Assessment 1993* at 11.

³¹ Haiou Yang et al., Life Expectancy in the State of Hawaii i: 1980 and 1990 , Office of Health Status Monitoring, Department of Health, *R & S Report*, Issue No. 63 (August 1996) at 12.

³² United States, Office of Technology Assessment, Staff Paper, Current Health Status and Population Projections of Native Hawaiian Living in Hawaii (April 1987), Tables 13 and 14 (pages not numbered).

³³ *Native Hawaiian Data Book 1996* at Table 1.5.

³⁴ Interview with Dr. David Johnson, research associate, Pacific Health Research Institute, on July 13, 1998. Dr. Johnson, who formerly ran the Heath Surveillance Program, stated that the sample frame (the list of people to be surveyed) for the HSP was originally done in 1976 with money from the Lieutenant Governor for voting purposes. It was updated in 1983 with OHA money for OHA s blood quantum survey, and at that time it took one year and 75 people to do the survey. Having enough money to spend to do the survey properly was a perennial problem, and the sample frame was repeatedly dropped and not maintained due to budgetary reasons. If the sample frame had been maintained, surveys would have been less expensive.

³⁵ Id.

³⁶ Interview with Dr. Alvin Onaka and Brian Horiuchi, Department of Health, Office of Health Status Monitoring, on August 4, 1998.

Chapter 5

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Hawai'i might have 220,000 Hawaiians among its 1.1 million residents. Then again, maybe the figure is 140,000. Or 208,000. Of those, perhaps 4 percent are full bloods, perhaps 35 percent have half or more Hawaiian blood. Then again, maybe not. . . . The figures are extremely conflicting, says retired state statistician Robert Schmitt. . . . [N]obody really knows. It s statistical chaos. And it s not just Hawaiians. Everybody is chop suey these days. . . . Racial statistics are so meaningless we should abandon them. They re just hash. ¹

The House Concurrent Resolution requesting this study asked the Bureau to identify, compile, evaluate, and summarize available demographic data on Native Hawaiians. This task is complicated by the fact that the vast majority of Hawaiians are of mixed ethnic heritage and do not always identify, when required to choose a single ethnic identity, as Hawaiian. Tracking reliable ethnic data on mixed-race populations is problematic; at least one major international agency no longer does so due to the complexity that results.² However, at this point in time, these figures are necessary for the State for planning purposes.

This study contains the following components:

- **Identification:** The Bureau has identified reliable sources for a wide range of demographic data in chapter 3.
- **Compilation:** The text of some of these sources is included in the appendices. These sources and a number of others are available in the Legislative Reference Bureau Library in a special section. It was impossible to include them in this study as the materials are too voluminous, amounting to over a thousand pages.
- **Evaluation:** As stated throughout this report, one of the major stumbling blocks of compiling Hawaiian data is determining how to calculate who is Hawaiian. There is no perfect system for doing this. The two primary standards, self-identification and genetic background, have their own sets of advantages and disadvantages. Self-identification is easy to use as a

standard, and has the benefit of comporting with the person's own perception of his or her ethnic identity. However, self-identification as it is currently used is limiting, as it restricts Hawaiians, the vast majority of whom are of mixed heritage, to only one facet of their identity. Self-identification is fluid and can change over time or from one situation to the next. It also leads to so-called under-reporting of Hawaiians.

In contrast, genetic background, as determined by looking at the person's parents' backgrounds, is stable, but it also has drawbacks. Because it labels a person Hawaiian who has any degree of Hawaiian blood, it labels a person Hawaiian who may not identify as Hawaiian. It negates any other facets of a person's ethnic heritage and may not comport with the person's cultural practices or lifestyle. It is also complex and time-consuming to track, and the scope of information required would not be appropriate or feasible for all state agencies to collect.

The proposed U.S. Census system, which will allow persons to self-identify as to all elements of their ethnic heritage, may be a workable compromise between these two systems, if the details of collapsing the matrix to provide a single ethnic identity are satisfactorily resolved.

As stated in prior chapters, many state agencies and the U.S. Census use self-identification to classify Hawaiians. A comparison to the genetic Hawaiians as determined by the Health Survey shows that there are about half again as many Hawaiians by heritage as by single-self-identification. The self-identification figures should only be used for planning purposes with the understanding that this undercount exists. The Health Survey figures, while they reveal a larger number of Hawaiians, are not available for many demographic categories, such as employment, education, and housing.

- **Summarization:** According to the latest published numbers from the Department of Health (DOH), as of 1996 there were 237,128 Hawaiians in the State, of whom there were 161,351 on O`ahu; 36,408 in Hawai`i county; 26,798 in Maui county; and 12,572 in Kaua`i county. See Appendix E. The DOH does not keep a record of Hawaiians living outside the State. By comparison, according to the numbers from the last U.S. Census (1990), there were 138,742 Hawaiians in the State (more than 40 percent lower

than the Health Surveillance Program (HSP) numbers), of whom there were 91,967 on O'ahu; 23,120 in Hawai'i County; 15,919 in Maui county, and 7,736 in Kaua'i county. A reported 72,272 Hawaiians lived elsewhere in the United States (see Appendix F). Age and sex distribution can be found in Appendix G.

The only modern-day study of blood quantum was done in 1984 and was done on a population sample. At that time, it was estimated that there were 8,244 full Hawaiians; 72,709 Hawaiians between 99% and 50%; and 127,523 Hawaiians with less than 50% Hawaiian blood. Age grouping reveals the trend towards dilution of Hawaiian blood: in 1984, only 12.4% of children age 19 and younger were 100% Hawaiian; but 36.6% of those in the 99% to 50% category were children; and the majority -- 59.2% -- of those with less than 50% Hawaiian blood were children.

Data on education is presented in Appendix H. Data on income is presented in Appendix I.

Findings

1. The vast majority of Hawaiians are of mixed ethnic ancestry.
2. While a great amount of demographic data on Hawaiians exists, demographic data on Hawaiians is not kept in a standard or uniform manner either among the state agencies or in the private sector.
3. There are two primary methods of typing Hawaiians: (1) by single-source self-identification; or (2) by parents' ethnic heritage (genetic method). The self-identification method has the virtue of reflecting the respondent's own perception of identity, and, perhaps, the respondent's cultural identity as well. The genetic method tracks down those with any amount of Hawaiian blood, however small, despite how the person would classify himself or herself. The disparity between the two methods is great. To illustrate, in 1990, the U.S. Census, using the self-identification method, reported 138,742 Hawaiians. For that same year, the Department of Health's Health Surveillance Program (HSP), using the genetic method, reported 205,079 Hawaiians. In other words, the HSP's method of looking at ancestry produced 66,337, or 48 percent, more Hawaiians than the Census' self-identification method.

4. According to the 1990 Census, approximately one-third, or 72,272, of all Hawaiians in the United States live on the Mainland. The largest group, 34,447 in 1990, lives in California. The Mainland figures are probably an undercount, given the fact that the Census, using the self-identification method, underreports significantly for the Hawaiians in the State. No entity, other than the Census, currently tracks Hawaiians who live outside the State.

5. The latest blood quantum study was released in 1986, based on 1984 data, on behalf of the Office of Hawaiian Affairs, which found that there were:

- 8,244 full Hawaiians in the State, or 4% of the total;
- 72,709 50% to 99% Hawaiians, or 35%; and
- 127,523 Hawaiians with less than 50% Hawaiian blood, or 61%.

The combined total, as of 1984, of all Hawaiians in the State with a blood quantum of 50 percent or more (and thus eligible for Hawaiian Home Lands), is 80,953. SMS Research has done population projections for the Department of Hawaiian Home Lands in which it states that it is thought that there were approximately 69,000 Hawaiians with 50 percent or more blood quantum in 1995, but no source was cited for that estimation.

The comparatively low rate of births in which both parents are of Hawaiian blood (less than 34 percent in 1990) leads to the conclusion that the growth of the number of Hawaiians with less than 50 percent Hawaiian blood will continue to outpace that of the other Hawaiian groups.


6. There is no roster of Hawaiians similar to the tribal rolls established for membership in Native American tribes. Hawai'i has always worked by self-representation of Hawaiian identity.

7. The U.S. Census is changing the system that it has heretofore used to collect ethnic data. In prior years, respondents could only choose one self-selected identity. Starting with the year 2000 Census, each respondent will be permitted to select a number of ethnic identities from a second-tier list. In this way, all of a respondent's ethnic heritage can be recorded. The Census will then collapse the

matrix for people who selected multiple ethnic identities to come up with a single ethnic identifier for each individual in one of the five first-tier categories (Alaska Native/Native American, Asian, Black, Caucasian, and Hawaii/Pacific Islander), so that large scale data can be generated. No one knows, at this point how the Census is going to collapse the multi-ethnic secondary tier matrixes into one first-tier identity. It should be possible to request and sort data reports by multiple secondary-tier identities, even across primary categories.

Conclusions

1. Collection of demographic data on Hawaiians will continue to be important to the State as long as the State has significant obligations to the Hawaiian population over and above those to other state residents. As long as the State has these obligations and entitlement programs, the State needs to keep track of data on Hawaiians. The Hawaiian population is expanding; Census figures reveal an expansion from 102,403 in 1960 to 115,500 in 1970 and 138,742 in 1990.³ As the Hawaiian genes diffuse into the population and result in rapidly expanding numbers of Hawaiians, the State's responsibilities will continue to increase.



2. While the ethnic tracking performed by the DOH's Hawaii Health Survey provides the most in-depth information on ethnic background, this system is not practicable for use by most state agencies, as it involves asking the respondent for his or her parents' ethnic identities and then coding them. The current system shortchanges residents with mixed ethnic heritage who are not part Hawaiian as for the most part data is not collected on who they are, what their array of ethnic heritages are, and how many of them there are. It may be important, for example, when studying the impact of a specific medical condition on a non-Hawaiian ethnic group, such as the Japanese, to know what the impact is on those of pure Japanese descent, and the impact on those of mixed descent. Right now, such data are not being collected.

3. The population of the State of Hawai'i is in flux: the fastest growing ethnic group is the mixed-ethnic heritage group (both Hawaiian and non-Hawaiian). In another generation it may not be practicable to try to sort residents by ethnic group. The State should consider alternatives now, such as sorting by economic status, so that collection of that data can be run in parallel with ethnic data collection. In that way, when or if ethnic data collection is phased out or modified, the State will have a

historical record of this other type of data collection that can be used for planning purposes.

Recommendations

1. The Department of Health should receive additional positions to run the Health Survey as completely as possible, and produce the data as quickly as possible within the parameters of accuracy. The Department should return to the type and method of data collection used prior to 1995. Additional funding should be provided to the Department for these purposes, either as a direct part of their budget or through assessments from all other state departments that rely on DOH data.

2. The Health Survey should maintain its current classification format to preserve continuity of data and to give the State a sense of the total number of Hawaiians for entitlement purposes. However, for all other purposes, unless the State reaches a mutual agreement with the major private demographers in the State on a different format, state agencies should use self-identification for classification. Self-identification is mutable but it has the benefit of being the person's own selection, and may mean that the person is culturally similar to the ethnic group the person identifies with. Cultural behavior in some instances may be as valuable a classification tool as genetic heritage. People should not be placed into categories by appearance or last name, even if this results in the creation of an "unspecified" category. Having a small "unspecified" category is preferable to using these types of classification, which blur the results by making the data look superficially tidy but which are essentially unreliable.

3. For the time being, the Department of Health should collaborate with local demographers to devise a common format for recording who is Hawaiian so that private studies can be cross-referenced to state reports. Specific entities that should be contacted to participate in this discussion include ALU LIKE, the Office of Hawaiian Affairs, Kamehameha Schools, and Papa Ola Lōkahi.

4. After the year 2000 Census system has been collected and reported, the Department of Business, Economic Development, and Tourism and the Department of Health should review it to determine whether it would be a more useful tool for tracking ethnic data than single-choice self-identification. The advantages to the proposed Census system is that it allows a respondent to select all their ethnic heritages, so it is similar to the Health Survey method in that it can collect data on a person's

Hawaiian heritage without the Hawaiian heritage being the primary ethnic identity chosen by the person, and it also allows the matrix of multiple identities to be collapsed into one, so that the more standard type of tables, charts, and graphs that use only one ethnic identity can still be compiled. The only issue is how the Census is going to choose to collapse the multiple-identity matrix. Even if the Census chooses a mechanism that does not comport with the Hawaii experience (e.g., classifying a person with Hawaiian and black blood as black when the more typical local experience might be to classify the person as Hawaiian), the mechanism might be modifiable to be a better classification tool than we have now.

5. The Department of Health should study the issues and report to the Legislature on the potential of privatization of Hawaiian demographic data collection and reporting.

Endnotes

¹ A Statistician's Nightmare, *Honolulu Magazine* (November 1997) at 106.

² Robert A. Hahn and Donna F. Stroup, Race and Ethnicity in Public Health Surveillance: Criteria for Scientific Use of Social Categories, *Public Health Reports: Journal of the U.S. Public Health Service*, Vol. 109, No. 1 (Jan-Feb 1994) at 12: Internationally, the variety of racial/ethnic data complicates comparison, and [p]erhaps for this reason, the World Health Organization does not record race or ethnicity in its international health statistics.

³ Office of Hawaiian Affairs, Population Past and Present, Table 1.2, *Native Hawaiian Data Book 1996*. The 1970 figures were dropped due to the high probability of an undercount (see discussion of paper genocide in prior chapters).

Appendix A

HOUSE CONCURRENT RESOLUTION NO. 156, S.D. 1

HOUSE OF REPRESENTATIVES
NINETEENTH LEGISLATURE, 1998
STATE OF HAWAII

H.C.R. NO. 156
S.D. 1

HOUSE CONCURRENT RESOLUTION

REQUESTING THE LEGISLATIVE REFERENCE BUREAU TO IDENTIFY,
COMPILE, AND SUMMARIZE AVAILABLE DEMOGRAPHIC DATA ON
NATIVE HAWAIIANS.

1 WHEREAS, various federal, state, and private programs are
2 directed at the descendants of the inhabitants of the Hawaiian
3 Islands prior to 1778; and

4
5 WHEREAS, these programs include the efforts of the
6 Department of Hawaiian Home Lands (DHHL) pursuant to the
7 Hawaiian Homes Commission Act of 1920 and the Office of
8 Hawaiian Affairs (OHA) pursuant to chapter 10, Hawaii Revised
9 Statutes; and

10
11 WHEREAS, decisions relating to the funding and
12 implementation of such programs rely in large part on current
13 and projected demographic data on Native Hawaiians; and

14
15 WHEREAS, a number of larger issues affecting the Native
16 Hawaiian community will likely be considered within the Native
17 Hawaiian community and elsewhere over the coming years; and

18
19 WHEREAS, decisions relating to these larger issues will
20 likely rely significantly on current and projected demographic
21 data on Native Hawaiians; and

22
23 WHEREAS, the specific demographic data which is or may
24 become relevant to current and future decisions on Native
25 Hawaiian programs and issues includes but is not limited to the
26 following information on the number of Native Hawaiians, both
27 current and projected; total population; residence, both within
28 Hawaii and elsewhere; and distribution by age, gender, blood
29 quantum, education, and income; and

30
31 WHEREAS, one significant issue is the blood quantum of
32 Hawaiians, as some rights require only the simple assertion of
33 the person's ancestry, while others require exhaustive searches
34 through generation of legal and official documentation, as
35 certain rights are tied to percentage of Native Hawaiian blood,

1 and the existing data on that issue tends to be soft as racial
2 identification in many instances comes from an individual's
3 self-identification, which can differ according to society's
4 attitude toward a particular race at a given time, leading to
5 under- or over-reporting; and
6

7 WHEREAS, some such demographic data has been accumulated
8 in publications including OHA's Native Hawaiian Data Book and
9 Population Survey/Needs Assessment and DHHL's Beneficiary Needs
10 Study; and
11

12 WHEREAS, such demographic data as does exist appears to be
13 incomplete and outdated and does not include projections of
14 future data; and
15

16 WHEREAS, there is a pressing need to develop complete
17 current and projected demographic data on Native Hawaiians for
18 utilization and reference in making informed decisions on
19 current and future Native Hawaiian programs and issues; now,
20 therefore,
21

22 BE IT RESOLVED by the House of Representatives of the
23 Nineteenth Legislature of the State of Hawaii, Regular Session
24 of 1998, the Senate concurring, that the Legislative Reference
25 Bureau is requested to identify, compile, evaluate, and
26 summarize available demographic data on Native Hawaiians
27 including but not limited to total population, residence both
28 within Hawaii and elsewhere, and distribution by age, gender,
29 blood quantum, education, and income; and
30

31 BE IT FURTHER RESOLVED that the Bureau is requested to
32 examine the Department of Business, Economic Development, and
33 Tourism's annual State of Hawaii Data Book, the Department of
34 Health's annual Health Surveillance Program Report; the Office
35 of Hawaiian Affairs' biennial Native Hawaiian Data Book and its
36 1986 Population Survey/Needs Assessment; the federal
37 government's decennial national census and supplements, the
38 Department of Hawaiian Home Lands' 1995 Beneficiary Needs
39 Study, and other literature on the topic; and
40

41 BE IT FURTHER RESOLVED that the Bureau is requested to
42 survey how established Hawaiian agencies such as the Department

. H.C.R . NO. &

1 of Hawaiian Home Lands, Office of Hawaiian Affairs, Alu Like,
2 and others acquire demographic data; and

3
4 BE IT FURTHER RESOLVED that all relevant federal, state,
5 and private entities are requested to cooperate fully with the
6 Bureau in good faith toward achieving the goals of this
7 Concurrent Resolution; and

8
9 BE IT FURTHER RESOLVED that if entities representing
10 Hawaiian interests claim that they cannot release data to the
11 Bureau, the Bureau is requested to evaluate these claims and
12 recommend legislative action necessary to removing barriers to
13 the information; and

14
15 BE IT FURTHER RESOLVED that the Bureau is requested to
16 report its findings and conclusions to the Legislature no later
17 than twenty days before the convening of the Regular Session of
18 1999; and

19
20 BE IT FURTHER RESOLVED that a certified copy of this
21 Concurrent Resolution be transmitted to the Director of the
22 Legislative Reference Bureau.

Table 1.3 The Racial Composition of the State of Hawai'i: 1990.

Race	1990 Census Bureau ^a		1990 Health Surveillance ^b	
	Population Estimate	Percent	Population Estimate	Percent
Caucasian	369,616	33.35%	262,605	24.10%
Hawaiian	138,742	12.52%	205,079	18.82%
Chinese	68,804	6.21%	51,294	4.71%
Filipino	168,682	15.22%	123,641	11.35%
Japanese	247,486	22.33%	222,014	20.38%
Others	114,899	10.37%	224,940	20.64%
Total	1,108,229		1,089,573	

^a Hawaiian as defined by the U.S. Bureau of the Census. "The Concept of race as used by the Census Bureau reflects self-identification; it does not denote any clear-cut scientific definition of biological stock."

^b Hawaiian as defined by the Health Surveillance Program. The Health Surveillance Program (HSP) examined the ethnic background of the parents of each individual as provided by that individual. Racial background of each individual is based on the racial composition of his/her parents. Consequently, a determination can be made between those of Pure-Hawaiian ancestry and those of mixed-Hawaiian ancestry. The Program does not cover the institutionalized populations (military barracks, nursing homes, prisons, dormitories), the Island of Ni'ihau and Kalaupapa Settlement in their research. Note: The data is based on a sample and is subject to sampling variability. Since 1989, Portuguese are classified as "Other Hispanic," no longer as "Caucasian."

Source: United States. Bureau of the Census. 1990 Census of Population. General Population Characteristics, Hawaii. 1990 CP-1-13. (Washington, 1992). Hawai'i State. Department of Health, Health Surveillance Program. Special Tabulation. (Honolulu).

The manner in which one determines racial background can alter the racial distribution of a region. There is a significant difference in the Native Hawaiian population reported by the U.S. Bureau of the Census and the State of Hawai'i, Department of Health, Health Surveillance Program. The Health Surveillance numbers include those of mixed-Hawaiian ancestry with any measure of Hawaiian blood. It is probable that many of these individuals when constrained to identify themselves under a single racial category on the census form, or any type of informational form, designate a racial group other than Hawaiian.

Table 1.8 The Native Hawaiian Population in the United States: 1990.

State	State Population	Native Hawaiian ^a Population	
Alabama	4,040,587	343	0.01%
Alaska	550,043	934	0.17%
Arizona	3,665,228	1,690	0.05%
Arkansas	2,350,725	226	0.01%
California	29,760,021	34,447	0.12%
Colorado	3,294,394	1,368	0.04%
Connecticut	3,287,116	269	0.01%
Delaware	666,168	65	0.01%
District of Columbia	606,900	101	0.02%
Florida	12,937,926	2,049	0.02%
Georgia	6,478,216	847	0.01%
Hawai'i	1,108,229	138,742	12.52%
Idaho	1,006,749	476	0.05%
Illinois	11,430,602	1,000	0.01%
Indiana	5,544,159	528	0.01%
Iowa	2,776,755	244	0.01%
Kansas	2,477,574	422	0.02%
Kentucky	3,685,296	338	0.01%
Louisiana	4,219,973	411	0.01%
Maine	1,227,928	115	0.01%
Maryland	4,781,468	636	0.01%
Massachusetts	6,016,425	505	0.01%
Michigan	9,295,297	787	0.01%
Minnesota	4,375,099	383	0.01%
Mississippi	2,573,216	166	0.01%
Missouri	5,117,073	621	0.01%

State	State Population	Native Hawaiian ^a Population	
Montana	799,065	179	0.02%
Nebraska	1,578,385	243	0.02%
Nevada	1,201,833	1,534	0.13%
New Hampshire	1,109,252	116	0.01%
New Jersey	7,730,188	638	0.01%
New Mexico	1,515,069	408	0.03%
New York	17,990,455	1,496	0.01%
North Carolina	6,628,637	963	0.01%
North Dakota	638,800	76	0.01%
Ohio	10,847,115	785	0.01%
Oklahoma	3,145,585	712	0.02%
Oregon	2,842,321	2,415	0.09%
Pennsylvania	11,881,643	859	0.01%
Rhode Island	1,003,464	112	0.01%
South Carolina	3,486,703	426	0.01%
South Dakota	696,004	74	0.01%
Tennessee	4,877,185	503	0.01%
Texas	16,986,510	2,979	0.02%
Utah	1,722,850	1,396	0.08%
Vermont	562,758	25	0.00%
Virginia	6,187,358	1,384	0.02%
Washington	4,866,692	5,423	0.11%
West Virginia	1,793,477	91	0.01%
Wisconsin	4,891,769	371	0.01%
Wyoming	453,588	93	0.02%
Total United States	248,709,873	211,014	0.08%

^a The data on race were derived from answers to questionnaire item 4, which was asked of all persons. Hawaiian as defined by the U.S. Bureau of the Census. "The Concept of race as used by the Census Bureau reflects self-identification; it does not denote any clear-cut scientific definition of biological stock."
"Hawaiian—Includes persons who indicated their race as 'Hawaiian' as well as persons who identified themselves as Part Hawaiian or Native Hawaiian."

Source: United States. Bureau of the Census. 1990 Census of Population, General Population Characteristics. 1990 CP-1. (Washington, 1992).

Appendix J

THIS MANUSCRIPT IS PART OF THE E OLA MAU UPDATE PROJECT OF PAPA OLA LOKAHI AND WAS MADE POSSIBLE IN PART BY A GRANT (NO.CSH-901849) FROM THE BUREAU OF PRIMARY HEALTH CARE, US PUBLIC HEALTH SERVICE. ITS CONTENTS ARE SOLELY THE RESPONSIBILITY OF THE AUTHORS AND DO NOT NECESSARILY REFLECT THOSE OF THEBPHC/PHS.

PAPA OLA LOKAHI HAWAIIAN HEALTH UPDATE: MORTALITY, MORBIDITY, MORBJDITY OUTCOMES AND BEHAVIORAL RISKS

Presented to:

Papa Ola Lokahi
March 1, 1996

By:

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INTRODUCTION

Purpose

This report provides a baseline assessment of Native Hawaiian Health at the time when the Native Hawaiian Health Care Act of 1988 programs are beginning to be implemented under Papa Ola Lokahi, an umbrella Hawaiian Health Agency that is responsible for coordinating the various Hawaiian Health initiatives throughout the state. Since Federal funding for these activities and organizations became available in 1989 in the form of planning and organizing grants, and the actual delivery of services began in 1990 and 1991, the data in this report targets this time period, reflecting the health status of Native Hawaiians at the beginning of this effort. It is expected that periodic studies of this type will be required in the future to determine the impact of these initiatives over time.

Scope

This effort provides comparable data and analysis of changes of health status, as measured by mortality and morbidity, taking the average of the 1980-86 and 1989-91 periods. This report looks at age-adjusted mortality and morbidity rates for the major causes of death and most prevalent diseases. The main comparison is between Native Hawaiians and the total population of the state. There are some data, which permit comparison between “pure” Hawaiians and “part” Hawaiians in terms of health status and outcomes.

An added feature of this report, are data on behavioral health risks obtained from the Behavioral Risk Factors Surveillance Survey conducted since 1986 by the Hawaii State Department of Health. These data show how Native Hawaiians compare with the state population in terms of their exposure to various health risks, based upon behaviors. This section addresses lifestyle factors such as smoking, drinking and being overweight. It also includes preventive measures taken by women to screen for breast and cervical cancer. The section illustrates time trends in these behavioral risks from 1987 through 1993.

MORTALITY

This section provides a picture of the major causes of death by ethnicity and gender. The mortality rates are age-adjusted to the total Hawaii population to more clearly show the comparisons among ethnic groups and genders. The rate of mortality is an important indicator of the health in a population, and the principal causes of mortality provide a picture of the kinds of medical and non-medical problems that need to be addressed in helping a group improve its level of well-being. Thus death caused by accidents, suicide or some preventable illness conditions might be averted with appropriate intervention.

The official registration of deaths began in Hawaii in 1908. Since records have been kept, all ethnic groups have experienced a downward trend in death rates until 1980 (7). There

has been a general decline in rates for cancer and heart disease over time until 1980 but these have shown a modest increase between 1980 and 1990 (8).

In reviewing the mortality trends since 1910, Native Hawaiians have experienced the highest age-sex standardized mortality rates of any major ethnic group in Hawaii (9). Part-Hawaiians have experienced mortality rates similar to non-Hawaiians, while Hawaiians have had much higher rates than other groups. For mortality caused by cancer, Hawaiian males have had the highest rates of all groups. They were among the highest for cancer of the stomach and have had the lowest survival rate from colon cancer. Hawaiian females have had higher mortality rates than females from other groups for cancer of the breast and cervix (7).

Another indicator of mortality is life expectancy. Historically Native Hawaiians have had among the lowest life expectancy of all groups in the population. Their life expectancy from birth has ranged from five to ten years less than the overall population average during the period from 1910 through 1970 (2). The most recent life tables for 1980 show Hawaiian life expectancy at birth about five years less than the total population of the State (1).

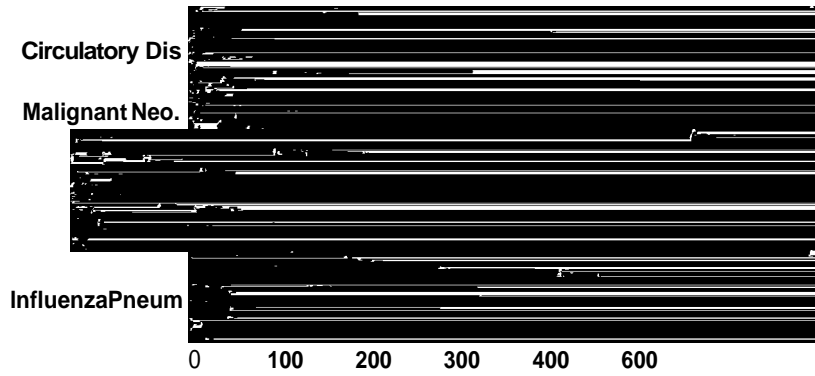
Present status

For purposes of this analysis, mortality data for the major ethnic groups of Hawaii are based on the vital statistics for the years of 1989 through 1991. The causes of mortality are those utilized by the official national and state vital records.

Table 2 compares the mortality rates for each cause of death by ethnicity and gender. A consistent pattern emerges. The combined category Native Hawaiians includes Hawaiians (pure) and Part-Hawaiians and is generally the highest, next to Caucasians, across different causes of death. For all causes of death, pure Hawaiians have the highest rates, next are Caucasians, Native Hawaiians Part-Hawaiians, Filipinos, Chinese, and Japanese. Pure Hawaiians generally have the highest mortality rates by cause of death, with Part-Hawaiians closer to the overall average rates.

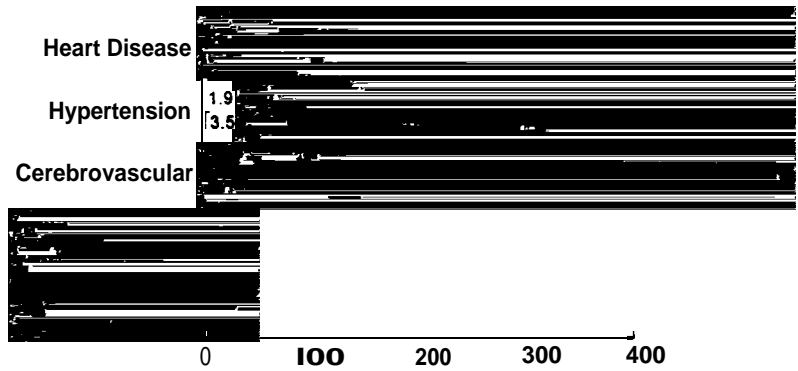
When comparing the Hawaiian, Part-Hawaiian and Native Hawaiian categories with the total rates they are generally higher across all major causes of death. The top causes of death for the Native Hawaiian categories are the same as for the overall total population. The major difference is that the Native Hawaiian rates are higher, with the pure-Hawaiian much higher than the Part-Hawaiian group. Figures 1 A-C show that the highest mortality rate is for circulatory disease, with Hawaiians higher than Part-Hawaiians and the overall total rate. Heart disease and cerebrovascular disease are the highest circulatory diseases (see Figure 1B). The second highest rate of mortality is for malignant neoplasms, again with pure Hawaiians much higher (See Figure 1 A). Cancer of the respiratory system and digestive system are highest, again with Hawaiians much higher than Part-Hawaiians and the overall total. For Native Hawaiians, accidents, diabetes, influenza/pneumonia round out the top five causes of death. Figures 1A-C show that while the pattern of cause of death is similar between Hawaiians and Part-Hawaiians, the former generally have much higher rates. Again, Native Hawaiians show higher than average mortality rates among the major causes of death.

Figure 1A
Top Five Mortality Conditions
 Age-Adjusted Rates Per 100,000 Population



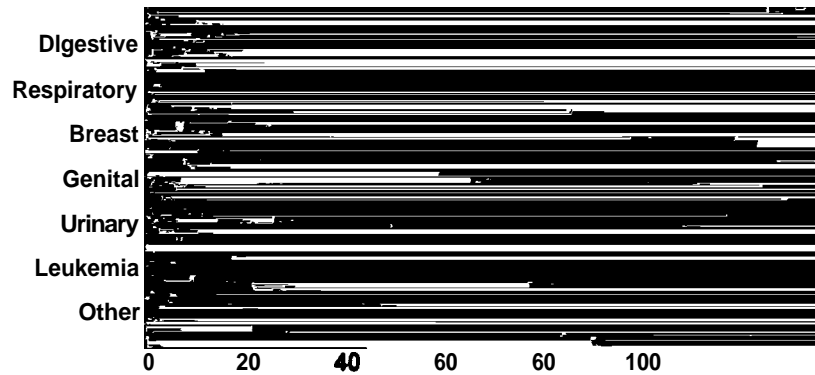
Source: Vital Statistics Office, DOH

Figure 1B
Mortality Conditions Relating to Circulatory Diseases
 Age-Adjusted Rates Per 100,000 Population



Source: Vital Statistics Office, DOH

Figure 1C
Mortality Conditions Relating to Malignant Neoplasm
 Age-Adjusted Rates Per 100,000 Population



Source: Vital statistics Office,

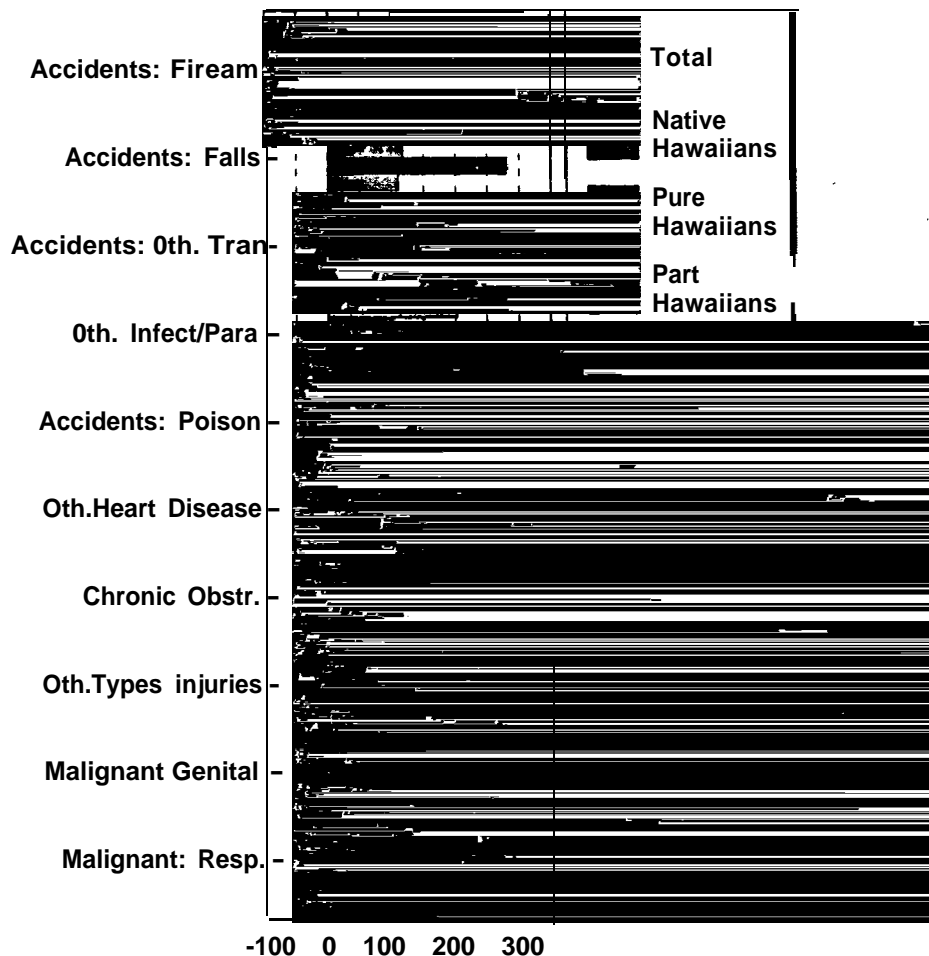
Males and females share the major causes of death and have similar patterns to those described for the total population. Males have higher rates than females across all the top causes of death, except for female diseases such as breast cancer. Heart disease and ischemic heart rates are the highest for both sexes. Next is cancer of the respiratory system and cancer of the digestive system for both males and females, except that Hawaiian females have higher rates of cerebrovascular disease. Hawaiian males have the highest mortality rates overall, often doubling, tripling or quadrupling the overall population average. Hawaiian females, while lower than males, have extremely high mortality rates for these same causes of death. The age-adjusted rates have the effect of age removed and so these differences between genders is not due to differences in their age-distribution (See Tables 2B-C).

Comparison with 1980-86

This section of the analysis will compare the current age-adjusted mortality rates for 1989-91 with those that were computed for 1980-86 in order to ascertain the magnitude and direction of differences that have occurred between the 1980-86 mid-point (1983) and the 1989-91 mid-point (1990). This represents a seven year time differential between the mid-points of the two sets of mortality rates. The earlier data was also computed from the cause of death statistics obtained from the Office of Vital Statistics of the Hawaii State Department of Health. The age-adjustments for both sets of mortality statistics are identical, so that direct comparisons of rates can be done. The approach has been to compute the percentage difference in age-adjusted rates for the two periods, thus making it possible to compare changes across both gender and ethnic groups (See Table 3). The charts in this section of the report illustrate the percentage change in age-adjusted mortality rates between the two periods, rather than the rates per se.

Table 3 shows that, overall, Hawaiians had the greatest percentage increase in mortality rates over all causes during the period 1980-6 to 1989-91 with a 48% increase. This was followed by Caucasians with an overall 40% increase, then Filipinos with a 31% increase, and Chinese with 25%. The overall increase across all ethnicities was 20% and those groups with less than 20% were Native Hawaiians 19%, Japanese 17%, Part-Hawaiians 16% and Others 3%. The fact that there was an overall 20% increase in mortality during that 7 year period is alarming and may be accounted for only in part by the aging of the population. We will look at the specific conditions that have increased the most and compare the Native Hawaiian categories with the total population.

Figure 2A
Percentage Increase from 1980-86 to 1989-91,
For the Top Ten Causes of Death



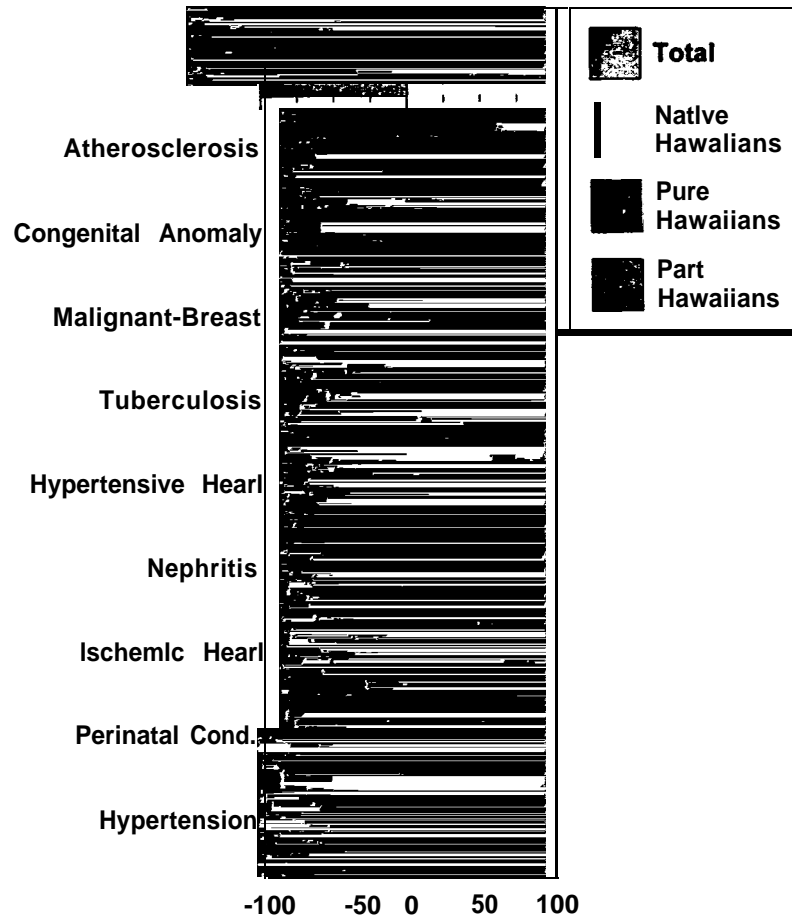
Source: Vital Statistics, Hawaii State Department of Health

In looking at Figures 2A and 2B it appears that those causes of death increasing most in the total population also increased the most among Native Hawaiians and conversely, those causes that declined in the total population were generally the same as those that declined in the Native Hawaiian population. Increases, however, are greater for Native Hawaiians than for the total population for some causes of death and smaller for other causes of death, even though both Native Hawaiians and the total population show an increase or decrease.

For Native Hawaiians, firearm accidents increased **300%** during the 7 year period from 1980-86 to 1989-91. This compares with a 100% increase for the total population. Deaths due to accidental falls increased 119% for Native Hawaiians and declined by 73% for the general population. Accidents appear to be an increasingly important cause of death for Native compared to the total population. Other infectious and parasitic diseases increased by

100% for Native Hawaiians and 200% for the total population meaning that, although this cause of death became more important for Hawaiians and for the total population, the change was only half for the Native Hawaiians as for the total population. This is also true for accidental poisoning, which increased at 100% for Native Hawaiians but much more rapidly for the total population. over 200%. Other heart diseases increased by 80% for Native Hawaiians compared to 70% for the total population. Chronic obstructive disease increased by 70% for Native Hawaiians compared to 34% overall. Other types of injuries increased by 68% for Native Hawaiians compared to 16% overall. Genital cancer increased by 58% for Native Hawaiians compared to 26% overall. Respiratory cancer increased by 52% for Native Hawaiians and only 30% overall. Other causes of death for Native Hawaiians increased but at a slower rate than those mentioned above.

Figure2B
**Percentage Decline from 1980-86 to 1989-91,
 For the Top Ten Causes of Death -**



Source: Vital Statistics, Hawaii State Department of Health

In Figure 2B, causes of death that declined in importance were somewhat similar for Native Hawaiians and the total population, although the rates of change varied. Native Hawaiians experienced a decline in accidental death due to fire (100%) compared to 97% for the total population; atherosclerosis (-41%) compared to -88% in the total population, congenital anomalies declined by -31% for Hawaiians compared to -42% in the total population. Also, there was a decline in deaths caused by breast cancer for Native Hawaiian women (-29%) compared to an increase of 19% for total women. Tuberculosis declined by -26% for Native Hawaiians compared to -38% for the total population. Hypertensive heart disease declined by -21% for Native Hawaiians compared to only -3% for the total population. Nephritis declined for Native Hawaiians (-20%) compared to an increase of 22% for the total population. Ischemic heart disease declined for Native Hawaiians by -14% compared to -10% for the total population. Perinatal conditions declined by -14% for Native Hawaiians compared to -23% for the total population. Deaths caused by hypertension among Native Hawaiians declined 12% compared to 0% change for the total population.

As with both sexes combined, the Native Hawaiian male and female patterns of change were similar to the total population males and females. Chronic obstructive, influenza/pneumonia, malignant neoplasms circulatory disease, cerebrovascular disease and heart disease show increasing importance in mortality for Native Hawaiian males and females as well as males and females in the total population. Decreasing importance for both males and females is found with hypertension, perinatal conditions, congenital anomalies and atherosclerosis. These declines are found also in the total population.

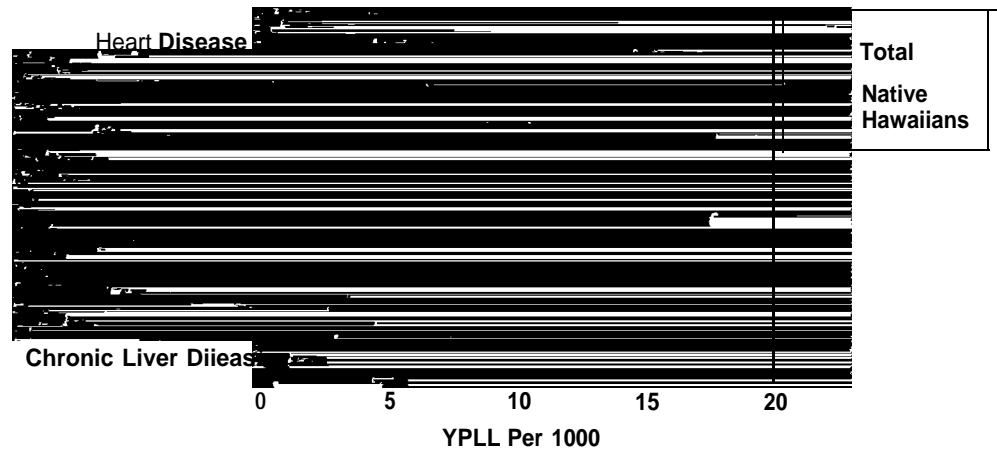
Native Hawaiian males and females have shown similar patterns of change for most major causes of death; however, for suicide and diabetes, Native Hawaiian females show a trend that is contrary to their female counterparts in the total population as well as in Native Hawaiian males. Suicide rates for Native Hawaiian males have increased (+18%) but have declined for females (-25%). This contrasts with increases in suicide rates for both males and females in the total population (+20% males, +8% females). Diabetes mortality has also increased for Native Hawaiian males (+28%) but declined for Native Hawaiian females (-10%). However in the total population, both sexes have shown increases(+15% males, +24% females).

Years of productive life lost

In order to evaluate the effect of mortality on different populations and to compare this among the different population groups, years of productive life lost (YPLL) is a technique of assessing the effect of mortality on different groups. The technique assumes that the productive years of life extend until age 65 and those who die prior to age 65 lose a number of years of productivity. If a person dies at age 65 or older, then no years of productive life are lost. The years of productive life lost are calculated for each person in the population and aggregated by cause of death and by ethnicity and gender. The total YPLL for each cause, sex and ethnicity are divided by the total number of deaths in each of those categories to produce an average of years of productive life lost for those deaths in each respective category.

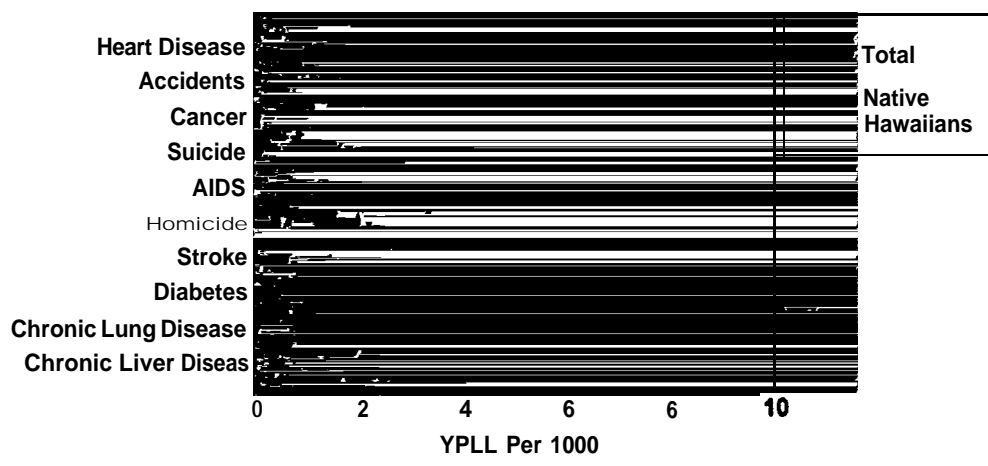
As a rule, Native Hawaiians have more YPLL than the overall population for each of the selected diseases. The only exception is for suicide among Native Hawaiian females, which is lower than for females overall. Also, males except for stroke and diabetes have more YPLL than females. The greatest number of YPLL is due to heart disease for Native Hawaiian males (see Figures 3A and 3B). Males lose an average of 15.5 years and females 8.2 years of productive life due to heart disease. This compares to 7.5 years for total population males and 6.4 for total population females. Both Native Hawaiian males and females have higher YPLL than the other groups being compared.

Figure 3A
Years Lost for Selected Mortality 1990
for Males



Source: R.M.Worth, HAPI MEDTEP Center, and Vital Statistics. DOH

Figure 3B
Years Lost for Selected Mortality 1990
for Females



Source: R.M.Worth, HAPI MEDTEP Center, and Vital Statistics DOH

Additional observations:

After heart disease, YPPL is greatest for accidents, particularly for Native Hawaiian males who have an average of 14 YPPL compared to 9.8 YPPL for all males. Native Hawaiian Females have only 4 YPPL by comparison. Nevertheless, they are higher than all women.

YPPL due to cancer is highest for Native Hawaiian males with 8.7 years compared to Native Hawaiian females with 8.2 years. The total population males and females by comparison each have 6.4 YPPL

As with other causes of death, males have more YPLL than females due to suicide. Native Hawaiian males have 6.3 YPLL compared to males overall (4.9 YPLL). However, Native Hawaiian females have fewer YPLL (0.9) than do females overall (0.7) due to suicide.

For AIDS, Native Hawaiian males have a YPLL of 6.1 compared to 5.6 for males overall. Native Hawaiian females have YPLL of 0.5 compared to the average of 0.3 for all females.

Homicide as a cause of death results in 3.6 YPLL for Native Hawaiian males compared to 1.9 YPLL for males overall. Native Hawaiian females have 1.5 YPLL compared to 1.1 YPLL for females overall.

Stroke causes the greatest YPLL for Native Hawaiian females (1.8) compared to Native Hawaiian males who lose 1.4 years of productive life.

YPPL for diabetes is much higher for both Native Hawaiian males and females (1.1 years each) compared to the overall YPLL for males and females which is 0.4 years.

Chronic lung disease has the greatest effect on Native Hawaiian males who lose 0.9 years of productive life, compared to males overall, who have 0.5 YPLL. Native Hawaiian females (with 0.5 YPLL). on the other hand, have lower YPLL than for women overall, which is 0.4 years.

Table 2 (total) Age adjusted mortality rates 1989-91

Table 3a (total) Changes In mortality rates 1980-6 to 1989-91

This section will show the distribution of morbidity within the Native Hawaiian population and between Hawaiian and the Part-Hawaiian population and the total State population. Morbidity is the presence of acute or chronic conditions due to illness (disease), accidents and injuries.

Chronic morbidity refers to long term **illness** and impairments. Data on chronic morbidity show that, over the past two or three decades, Native Hawaiians have experienced higher rates of chronic illness than have other groups. Studies show an inverse relationship between income and chronic illness and hospitalization for the state's population as well as among Native Hawaiians (12,13). Native Hawaiians report more hospitalization and days spent in bed due to illness than other groups.

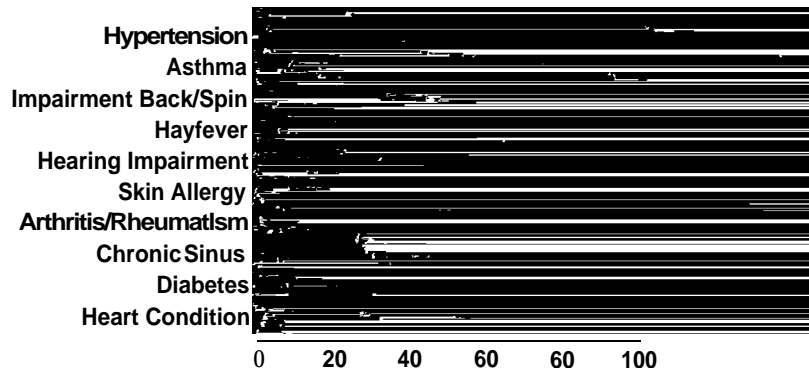
A 1978 study showed higher than expected age-sex standardized rates of heart disease, hypertension and cerebrovascular disease among Native Hawaiians, compared to Chinese, Filipinos and Japanese who had lower than expected rates(5). This same report shows that Native Hawaiians have the highest ranking of any group on selected chronic conditions, number of days spent in bed due to illness and number of hospital nights.

Present status

Of the top conditions, Native Hawaiians have higher age adjusted morbidity rates for hypertension, asthma, diabetes and heart conditions than does the total population. This compares to impairments of back and spine, hayfever, hearing impairments, skin allergies, arthritis and rheumatism, chronic sinusitis and impairments of lower extremities that have the same or lower age adjusted rates for Native Hawaiians than for the total population (See Table 4a)

The most prevalent chronic conditions are much the same for the total population as the Native Hawaiians. However, the age-adjusted morbidity rates for the Native Hawaiians are varied; some are higher and some lower than the total population. The top ranked chronic conditions that are higher for Native Hawaiians than for the total population are asthma, diabetes, heart conditions and hypertension. These conditions are a greater problem to Native Hawaiians than they are to the total population, although both are among the top chronic conditions. Top chronic conditions ranked about the same for Native Hawaiians and the total population are impairment of back or spine, hayfever, hearing impairment, skin allergy and arthritis/rheumatism. Chronic sinusitis is less for Native Hawaiians than for the total population, although it is ranked among the top chronic conditions overall (See Figure 4 below).

Figure 4
Top Ten(10) Chronic Conditions
 Age-Adjusted Rates Per 1,000 Population



Source: Health Surveillance Survey OHSM DOH

Among the Native Hawaiian subgroups, Hawaiians have higher rates compared to Part-Hawaiians for hypertension, diabetes and impairments of lower extremities.

The distribution of morbidity is slightly different for Native Hawaiian males and females. For males hypertension, asthma, heart condition and diabetes rates are higher for Native Hawaiians than for total population males. By comparison, Native Hawaiian females have higher age-adjusted rates for hypertension, asthma, arthritis/ rheumatism, skin allergies, hearing impairments, diabetes and heart conditions than do the total population females. This provides a basis for determining priorities for intervention.

Native Hawaiian males have higher rates of hypertension, impairment of back and spine, hearing impairments, heart condition, and diabetes. Native Hawaiian females have higher rates of asthma, hayfever, skin allergies and chronic sinusitis.

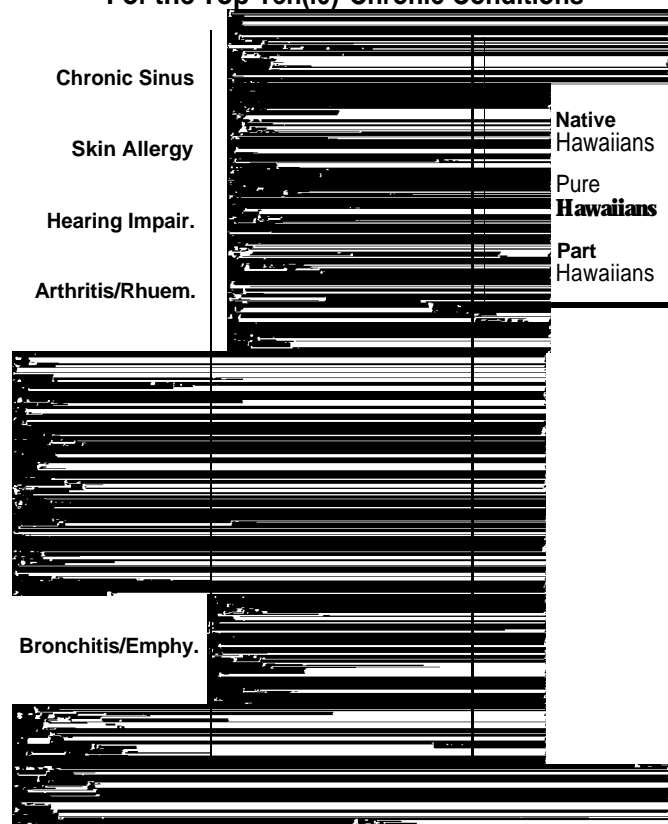
Comparison with 1980-86

Morbidity rates for the top chronic conditions have all risen between the 1980-86 and the 1989-91 period (See Table 5 and Figure 5 below). The overall average increase for chronic conditions was 17%. This compares to chronic sinusitis which increased by 131% for Native Hawaiians compared to 108% for the total population. Skin allergy increased by 78% for Native Hawaiians compared to 56% overall. Hearing impairments increased by 77% for Native Hawaiians compared to 71% overall. Arthritis/rheumatism was next with 75% compared to 58% overall. Next came varicose vein (73%), hayfever (59%), and impairment of back and spine (52%) compared to lower increases for the total population. While there are increases in the other chronic conditions, they were closer to the overall average.

Conditions which have increased the most for males are hearing impairment, arthritis/rheumatism, heart disease, and asthma in that order (See Table 5). Conditions that have

increased the most for females are hearing impairment, arthritis/rheumatism, impairment of back and spine, impairment of lower extremities, bronchitis/emphysema and hayfever in that order.

Figure 5
 Percentage Increase from 1980-88 to 1989-91,
 For the Top Ten(10) Chronic Conditions



Overall, morbidity increased more rapidly for both Native Hawaiian males and females than total males and females during the period 1980-86 to 1989-91. Conditions where Native Hawaiian males have higher percentages of change than found for the total males are hayfever and asthma. Changes in rates for Native Hawaiian females have increased more than total females for hayfever, asthma, hearing impairments, arthritis/rheumatism, impairment of back and spine, and impairment of lower extremities.

Table 4a (total) Age-adjusted Morbidity 1989-91

Table 5a (total) Changes in Morbidity Rates from 1980-6 to 1989-91

CANCER INCIDENCE 1988-92

An ethnic comparison based on the 1988-92 incidence data from the Hawaii Tumor Registry and other cancer registries participating in the Surveillance, Epidemiology and End Results (SEER) Program of the National Cancer Institute shows that Native Hawaiians rank fourth in the nation for overall cancer incidence (Table 6A) (15). Among the five main ethnic groups in Hawaii, Native Hawaiians had the second highest overall incidence rate of cancer for both sexes in 1986-90 (Table 6B). Table 6B also shows that although the ranking among ethnic groups has not changed in the state, the overall rate of cancer for Native Hawaiians may have decreased somewhat in recent years. Most of this change is due to a decline in stomach and cervical cancer rates which has decreased by about half between 1976-80 and 1986-90. Although declining stomach and cervical cancer rates have been long standing trends for all ethnic groups in the United States and in Hawaii, they appear to have taken a sharper slope in recent years for Native Hawaiians than for other ethnic groups. These trends in the U.S. as in other developed countries are thought to be the result of a decrease in intake of salted and other preserved foods (stomach cancer) and screening for, and treatment of, precancerous lesions (cervical cancer) (16).

In contrast to the favorable trends for gastric and cervical cancers, increases in incidence have occurred in Native Hawaiians for several major cancers, including female lung and breast cancers and, to a lesser extent, colon cancer in both sexes (Tables 6C and 6D). The increase in female lung cancer parallels the increase observed for Caucasian women and almost certainly reflects an increase in cigarette smoking 10-20 years earlier. In contrast male lung cancer rates for Native Hawaiians appear to have leveled off and possibly decreased. However, these rates remain extremely high, the highest in Hawaii and among the highest in the nation. A genetic predisposition to lung cancer was suggested by the observation that, for a given amount of smoking, lung cancer rates for Hawaiians are 2-fold greater than for Japanese and 50% higher than for Caucasians (17).

The rise in breast cancer rates in Hawaiian women has occurred **mainly** for early-stage tumors (in-situ and localized stages) (Table 6B) and, thus, may reflect progress in early detection due to an improved awareness and increased screening. This is consistent with the results of the Behavioral Risk Factor Survey conducted by the Hawaii Department of Health which showed an increased utilization of mammography by Native Hawaiian women between 1987 and 1990 (18). If this interpretation is true, a favorable impact on breast cancer mortality should be observed in the coming years. The increase in colon cancer rates is more moderate and rates for this cancer remain relatively low in Hawaiians.

It is noteworthy that in contrast to other ethnic groups in **Hawaii** and to whites on the U.S. mainland, rates have not changed in Native Hawaiians for another important cancer, namely, prostate cancer (Table 6C). Most of this increase in Hawaii and the rest of the U.S. is believed to be due to screening and is observed mainly but not entirely for the early-stage tumors (Table 6E). The lack of increase in localized prostate cancer in Native Hawaiians (Table 6E) suggests that prostate cancer screening (i.e. by serum PSA measurement) is not as common in this group as in the other ethnic groups in Hawaii.

Cancer remains a very significant cause of morbidity and mortality in Native Hawaiians. Among ethnic groups in Hawaii, Native Hawaiians continue to have the highest incidence and mortality rates for lung cancer and the highest mortality rate for all cancers and breast cancer. Although some favorable trends are noted, such as a leveling off of lung cancer rates in men, other trends are worrisome such as the increase in lung cancer rates in women.

Table 6A. Average Annual Age-adjusted (1970 U.S. Population) Incidence Rates for all Cancers by Ethnic/Racial Group, United States, 1988-92

<u>Ethnicity</u>	<u>Male</u>	<u>Female</u>
African American	559.7	325.9
White	469.2	345.5
Alaskan Native	372.8	347.7
Native Hawaiian	339.7	320.7
Vietnamese	326.2	272.6
Japanese	322.2	240.8
Chinese	282.3	213.3
Filipino	273.7	224.1
Korean	266.0	180.3
American Indian (New Mexico)	196.0	179.8

Source: National Cancer Institute, SEER Program

Table 6B. Age-adjusted (1970 U.S. Population) Average Annual Incidence Rates (per 100,000 for) all Cancers by Sex and Race, Hawaii, 1971-90

	Native Hawaiian	Caucasian	Japanese	eChinese	Filipino
MALE:					
1971-75	383.5	400.4	297.8	240.6	214.7
1976-80	407.6	444.7	299.1	281.2	237.2
1981-85	377.2	457.0	310.4	261.1	242.7
1986-90	367.3	503.8	314.1	261.8	267.7
FEMALE:					
1971-75	349.0	338.6	217.1	258.2	201.0
1976-80	330.2	356.6	214.1	253.7	195.1
1981-85	356.3	366.1	213.5	222.7	204.4
1986-90	326.1	406.1	255.4	234.4	225.3

Source: Hawaii Tumor Registry, May 1995

Table 6C. Age-adjusted (1970 U.S. Population) Average Annual Incidence Rates (per 100,000) for Males Hawaii, 1976-80 and 1986-90

		Native Hawaiian	Caucasian	Japanese	Chinese	Filipino
Stomach	1976-80	46.3	15.1	43.9	16.0	11.4
	1986-90	20.2	13.7	30.6	15.1	10.2
Colon	1976-80	24.6	40.3	40.8	34.9	25.9
	1986-90	28.3	47.8	52.0	31.4	23.6
Rectum	1976-80	17.3	18.3	25.2	20.5	19.0
	1986-90	18.1	18.8	25.8	18.9	19.6
Pancreas	1976-80	10.3	11.7	9.7	9.2	8.7
	1986-90	10.7	10.9	9.0	10.3	8.9
Lung	1976-80	114.0	83.6	48.1	50.4	33.7
	1986-90	95.1	85.8	45.2	37.4	45.3
Prostate	1976-80	58.9	81.5	44.5	38.3	48.9
	1986-90	58.7	127.7	63.4	56.2	61.6

Source:

1995

Table 6D
Age-adjusted (1970 U.S. Population) Average Annual Incidence
Rates (per 100,000) for Females, Hawaii, 1976-80 and 1986-90

	Native Hawaiian	Caucasian	Japanese	Chinese	Filipino
Stomach					
1976-80	23.7	8.0	19.4	13.6	8.8
1986-90	14.3	7.7	16.7	7.1	7.6
Col on					
1976-80	13.8	29.9	23.7	27.0	14.8
1986-90	17.6	35.4	31.6	27.1	16.9
Rectum					
1976-80	9.6	10.0	11.4	10.5	5.2
1986-90	6.5	11.5	10.3	10.5	9.6
Pancreas					
1976-80	9.8	10.4	6.6	9.8	3.3
1986-90	10.7	8.5	8.8	7.5	6.2
Lung					
1976-80	38.3	36.8	15.3	26.1	22.7
1986-90	51.6	50.8	13.3	22.8	20.9
Breast					
1976-80	99.7	102.0	51.4	68.0	37.5
1986-90	112.7	133.0	88.6	71.7	56.8
Cervix Uteri					
1976-80	15.8	10.1	7.1	10.8	7.5
1986-90	8.4	10.5	5.8	4.8	9.5
Corpus Uteri					
1976-80	24.0	32.8	18.9	25.0	15.2
1986-90	20.3	21.3	17.7	15.3	11.0
Ovary					
1976-80	9.8	13.4	8.2	9.6	8.7
1986-90	10.0	18.5	10.4	10.8	9.6

Source: Hawaii Tumor Registry, May 1995

Table 6E
Age-adjusted (1970 U.S. Population) Cancer Incidence Rates (per 100,000)
for Prostate and Female Breast Cancer, Hawaii, 1976-80 and 1986-90

	Native Hawaiian	Caucasian	Japanese	Chinese	Filipino
Male Prostate					
Localized					
1976-80	42.4	54.0	30.9	23.1	30.1
1986-90	34.6	79.8	39.9	33.6	35.0
Regional					
1976-80	3.3	9.6	4.8	4.3	7.4
1986-90	4.5	19.8	8.5	8.4	6.9
Distant					
1976-80	9.6	15.6	7.0	10.0	10.2
1986-90	15.8	20.7	10.9	12.1	15.4
Female Breast					
In situ					
1976-80	3.7	6.8	5.0	3.3	3.0
1986-90	15.4	21.9	16.4	14.1	5.2
Localized					
1976-80	51.1	57.6	33.7	42.6	21.0
1986-90	68.2	85.5	59.0	48.4	28.8
Regional					
1976-80	34.0	34.5	15.2	21.5	11.7
1986-90	33.6	38.5	25.2	19.3	21.9
Distant					
1976-80	13.1	7.1	2.1	3.2	4.5
1986-90	6.5	5.3	3.3	2.5	3.3

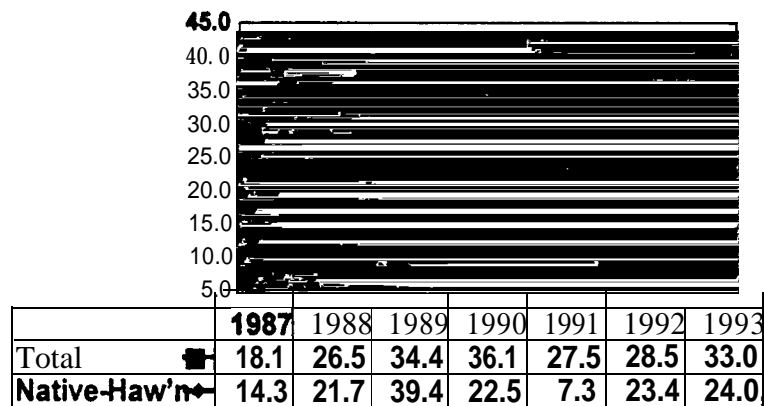
Source: Hawaii Tumor Registry, May 1995

BEHAVIORAL RISKS

Behavioral risks are those behaviors engaged in which place individuals at greater than average risk for chronic diseases, disability and premature death. The Surgeon General estimates that up to half of all deaths in the U.S. are due to unhealthy behaviors or lifestyle (19). This report states that seven of the ten leading causes of death in the U.S. could be reduced if persons at risk were able to control diet, smoking, alcohol use, prevent hypertension and engage in more physical exercise. These have been measured by the Hawaii Behavioral Risk Factors Surveillance Survey (BRFSS), operated by the Health Promotion and Education Branch of the Department of Health, since 1986.

High cholesterol. BRFSS respondents are asked if a health professional has informed them that they have high cholesterol during the past year. The overall trend in high cholesterol has increased between 1987 and 1993 for the total population as well as for Native Hawaiians. Native Hawaiians, however, show a lower percentage during each year, except for 1989, of reporting they have high cholesterol than the total population. Thus, even though Native Hawaiians report an increasing percentage having high cholesterol, their situation is not worse than that of the total population.

Figure 7A
Prevalence of High Cholesterol



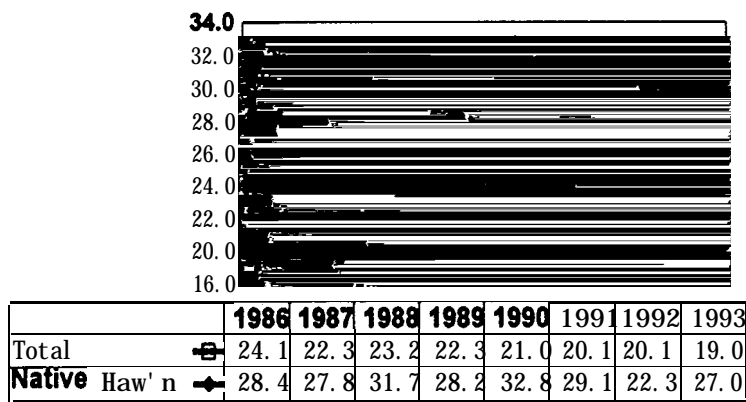
Source: BRFSS, Health Promotion & Education Branch, DOH

Cigarette smoking Smoking is the single most important preventable cause of death and disability in the U.S. (13). Cigarette smoking is linked to lung cancer, as well as cancers of the larynx oral cavity, pancreas and bladder (20). In addition cigarette smoking is responsible for many chronic pulmonary diseases such as emphysema and chronic bronchitis. In addition, it is responsible for heart attacks and various disorders of newborns whose mothers smoked during pregnancy. Fortunately, quitting smoking can reduce the risks of these diseases.

BRFSS respondents are asked if they currently smoke cigarettes. Native Hawaiian prevalence of cigarette smoking has not declined during the 1986-1993 period and continues to

remain much higher than for the total population. This indicates a need for greater awareness and education about the risks associated with cigarette smoking.

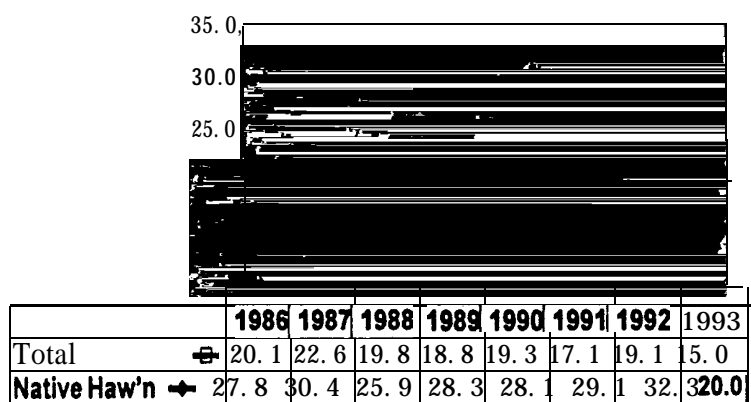
Figure 7B
Prevalence of Cigarette Smoking



Source: BRFSS, Health Promotion | Education Branch, DOH

Acute drinking. Alcohol abuse is a factor in more than 10% of all deaths in the U.S. and is associated with half of all traffic deaths (19). In addition, there is a growing awareness of the connection between alcohol abuse and various forms of violence both at home and in public places. Acute drinking is commonly known as “binge” drinking and is defined as having five or more drinks on one occasion, one or more times during the past month. During the period of 1986 through 1993 the prevalence of acute drinking for Native Hawaiians has been higher than for the total population and, for most of the years between 1987-1992 (Figure 7C).

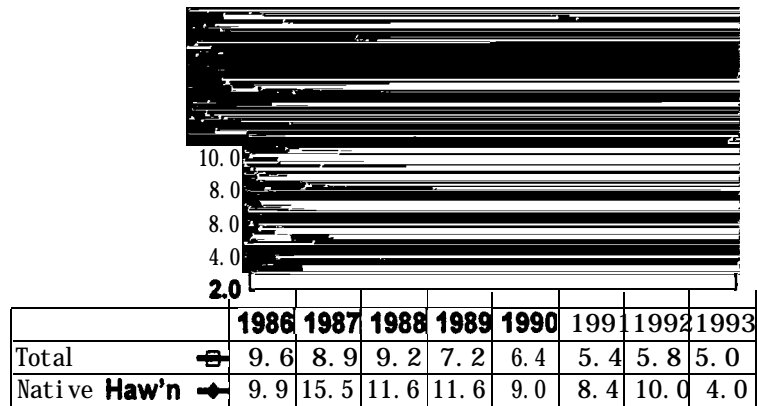
Figure 7C
Prevalence of Acute Drinking



Source: BRFSS, Health Promotion & Education Branch, DOH

Chronic drinking. Chronic drinking is **defined** as having 60 or more alcoholic drinks during the past month. This has been shown to be a risk factor for alcohol related mortality and morbidity (23). Figure 7D illustrates the trends in chronic drinking between 1986 and 1993 for Native Hawaiians and for the total population. For most of the years, between 1987-1992 the Native Hawaiian chronic drinking prevalence was much higher than for the total population.

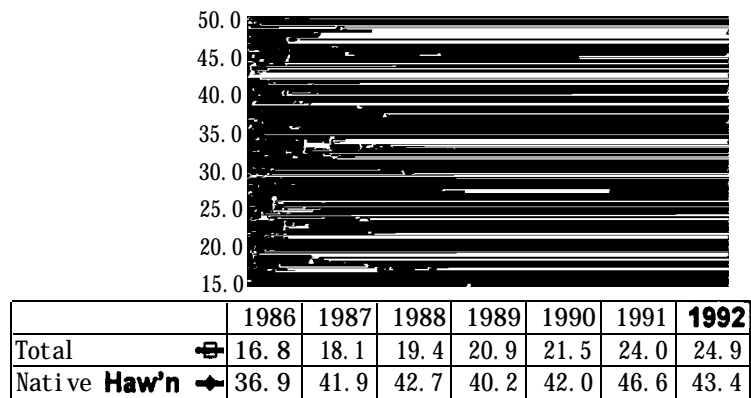
**Figure 7D
Prevalence of Chronic Drinking**



Source: BRFSS, Health Promotion & Education Branch, DOH

Overweight. The prevalence of overweight (defined as being more than 20% over the recommended weight) among Native Hawaiians exceeds that of the total population by a factor of two (See Figure 7E). The Native Hawaiian increase parallels the increase in prevalence of the total population, although the level of Native Hawaiian prevalence is much higher.

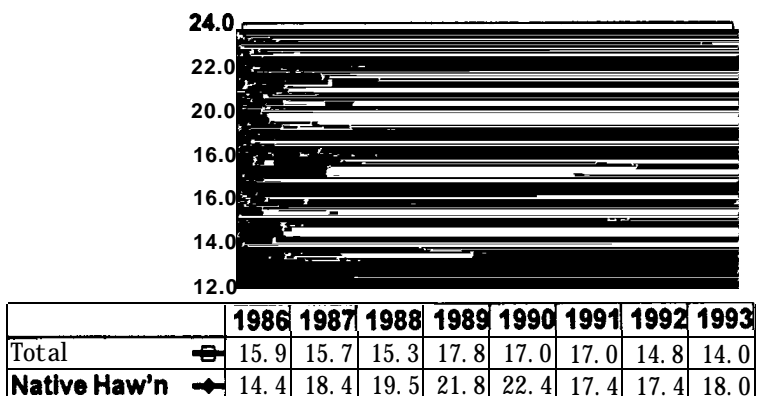
**Figure 7E
Prevalence of Overweight**



Source: BRFSS, Health Promotion & Education Branch, DOH

Hypertension BRFSS respondents are asked if a health professional has ever told them that they have high blood pressure or hypertension. The prevalence of hypertension in Figure 7F illustrates the known cases, but does not include those who have hypertension and do not know it. The trend line for Native Hawaiians shows a sharp increase in prevalence from 1986 to 1990 and then shows an equally sharp decline to 1993. The Native Hawaiian known prevalence increased and the total population prevalence declined during the period.

Figure 7F
Prevalence of Hypertension

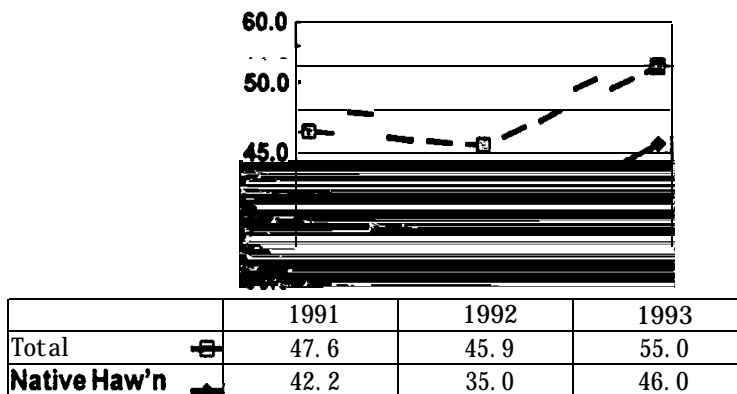


Source: BRFSS Health Promotion & Education Branch, DOH

Women's health screening

Beginning in 1991, BRFSS female respondents were asked if they ever had a mammogram. In 1991 some 48% of women in the general population said they had. By 1993, 55% of women reported having had a mammogram at some time. Percentages for Native Hawaiian women also increased during the period; in 1991, 42% said they had a mammogram and, by 1993, 46% said they had. The Native Hawaiian participation in mammogram screening is somewhat lower than for the total population (See Figure 7G).

Figure 7G
Women Who Had a Mammogram



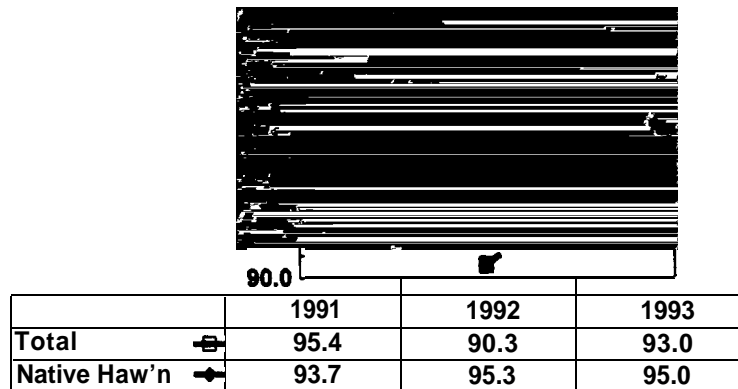
Source: BRFSS, Health Promotion & Education Branch, DOH

Compared to mammograms, far more women report having had a clinical breast examination. The overall percentage reporting having had a breast examination is about the same for Native Hawaiians as for the total population. In 1991 over 87% of Native Hawaiians and total population women said they had a breast clinical examination. However, by 1993, the percentage dropped slightly to 86% for Native Hawaiians and for total population women. This

method of screening should be done annually in order to be effective. It was found that, among women who ever had this type of examination, 80-90% had a breast examination within the past month, indicating that women who had the exam once generally continue breast cancer screening.

Beginning in 1991, BRFSS women respondents were asked whether they ever had a pap smear test. At that time 95% of total women said they had, compared to 94% of Native Hawaiian women (See Figure 71). This percentage fluctuated subsequently but, by 1993, 93% of total women and 95% of Native Hawaiian women reported having a pap smear test. This shows an increase in the percentage of Native Hawaiian women participating in this form of cancer screening. This compares to a decline in total women during the three year period.

Figure 71
Women Who Had a Pap Smear Test



Source: BRFSS, Health Promotion & Education Branch DOH

Overall, Native Hawaiian women are participating at nearly the same level as women in the total population regarding different cancer screening methods.

OVERALL SUMMARY AND RECOMMENDATIONS

Mortality

The overall age-adjusted rates for Pure Hawaiians is 2,200 per 100,000 compared to Part-Hawaiians (772 per 100,000) and Native Hawaiians (927 per 100,000). This compares with the rates for the total population of 650 per 100,000. Native Hawaiian sub groups are generally higher across all major causes of death, even though the top causes of death for the Native Hawaiian categories are about the same as for the overall total Population. Generally, pure Hawaiians have much higher age-adjusted mortality rates than Part-Hawaiians. Although pure Hawaiians are much fewer in numbers than Part-Hawaiians, it is important to assure their continuing survival through improved health with various Native Hawaiian health care initiatives and programs.

For Native Hawaiians, the causes of death are highest for circulatory disease (415 per 100,000), with heart disease (333 per 100,000) and cerebrovascular disease (58 per 100,000) being the highest in that category. Next are malignant neoplasms (231 per 100,000), with cancer of the respiratory system (80 per 100,000) and cancer of the digestive system (64 per 100,000) being highest in that category. Next are accidents (39 per 100,000), diabetes (35 per 100,000), and influenza/pneumonia (25 per 100,000). These top causes of death for Native Hawaiians have already been high priority targets for monitoring, screening and treatment programs in various Hawaiian health initiatives. This indicates that continuing efforts are justified.

Mortality rates have increased for the overall population by 20% during the period from 1980-86 to 1989-91. The average increase during the period for Native Hawaiian mortality rates was 19%, compared to Hawaiians 48% and Part-Hawaiians 16%. The causes of death that have increased the most for Native Hawaiians are accidents (firearm (300%), falls (119%), poisoning (100%)), other infectious and parasitic diseases (100%), other heart disease (80%) and malignant neoplasms (genital (58%) and respiratory (52%)). Along with the top causes of death discussed previously, these causes of death should also be high priority for monitoring and intervention among Native Hawaiians.

Causes of death for which rates declined for Native Hawaiians during the period are accidental deaths due to fire (-100%), atherosclerosis (-41%), congenital anomalies (-31%), breast cancer (-29%), tuberculosis (-26%), hypertensive heart disease (-21%), nephritis (-20%), ischemic heart disease (-14%), perinatal conditions (-14%), and hypertension (-12%). Most of these (accidental deaths due to fire, atherosclerosis, breast cancer, hypertensive heart, ischemic heart and hypertension) declined more rapidly than for the total population. This indicates relative progress in controlling these causes of death among Native Hawaiians.

The years of productive life lost (YPLL) for Native Hawaiians are greatest for heart disease, accidents, cancer and homicide. Suicide and AIDS cause greater YPLL for males than females, and stroke causes about equal YPLL for males and females. Native Hawaiians have a shorter average life expectancy than the overall population. By controlling these causes of death that contribute most to years of productive life lost, Native Hawaiians will enjoy greater longevity.

Morbidity

Although the most prevalent chronic conditions are much the same for the total population as for the Native Hawaiians, some of the age-adjusted morbidity rates for Native Hawaiians are higher and some are the same or lower than the total population. The top ranked chronic conditions for Native Hawaiians are hypertension (98 per 1,000), asthma (74 per 1,000), impairment of back or spine (74 per 1,000), hayfever (71 per 1,000), hearing impairment (55 per 1,000), skin allergy (49 per 1,000), arthritis and rheumatism (47 per 1,000), chronic sinusitis (44 per 1,000), diabetes (40 per 1,000) and heart conditions (38 per 1,000). Of these, asthma, diabetes, heart conditions and hypertension are a greater problem to Native Hawaiians than they are to the total population. The other top ten chronic conditions are the same or less of a

problem to Native Hawaiians than to the total population. Programs to monitor, screen and intervene in controlling diabetes, heart conditions and hypertension are underway in certain Hawaiian communities and it is important to maintain this effort in order to reduce the problems associated with these conditions.

Morbidity rates for the top chronic conditions have all risen between the 1980-86 and the 1989-91 period. The average increase for chronic conditions was 16% for the total population and 12% for Native Hawaiians, indicating less decline in health for Hawaiians. The chronic conditions that increased the most for Native Hawaiians are sinusitis (131%), skin allergy (78%), hearing impairments (77%), arthritis/ rheumatism (75%), varicose veins (73%), hayfever (59%), and impairment of back and spine (52%) For these conditions the total population experienced slower increases.

Conditions which increased the most for males are hayfever **hearing** impairment, arthritis/rheumatism, heart disease, and asthma Conditions that increased the most for females are hearing impairment, arthritis/rheumatism, impairment of back and spine, impairment of lower extremities, bronchitis/emphysema and hayfever in that order.

Pure Hawaiians, compared with Native Hawaiians, experience the greatest negative effects of the illness conditions. This contrasts with Part-Hawaiians, whose experience is closer to that of the overall population The conditions that have the greatest impact in terms of disability days, restricted activity and activity limitation are cerebrovascular disease, heart disease, malignant neoplasms, diabetes, mental and nervous conditions and impairments of the back and spine This is consistent with the fact that these conditions are also among the top chronic conditions in terms of prevalence, indicating that efforts toward monitoring, prevention and treatment of these conditions should be of the highest priority. There is no consistent pattern of difference between males and females regarding disability and activity limitation.

Behavioral Health Risks

The overall trend in high cholesterol has increased between 1987 and 1993 for the total population as well as for Native Hawaiians. Native Hawaiians, however, show a lower percentage during each year, except for 1989, of reporting they have high cholesterol than the total population. Thus, even though Native **Hawaiians report an** increasing percentage having high cholesterol, their situation is not worse than that of the total population.

Native Hawaiian prevalence of cigarette smoking has not decline **during the** 1986-1993 period and continues to remain much higher than for the total population. This indicates a need for greater awareness and education about the risks associated with cigarette smoking.

During the period of 1986 through 1993 the prevalence of acute drinking for Native Hawaiians has been higher than for the total population, and for most of the years between 1987-**1992. the** Native Hawaiian chronic drinking prevalence was much higher than for the total

population. Greater awareness and education about the health risks associated with drinking is appropriate.

Overweight in the total population increased during the 1987-1993 period. Native Hawaiian increases parallel the total population, although the level of Native Hawaiian prevalence is much higher. Some current efforts to promote lifestyle changes in diet are underway and have been successful. These efforts can be publicized along with expanded efforts to increase awareness of the health risks associated with overweight and encouragement and efforts to promote culturally appropriate programs.

The 1986 prevalence of hypertension was 14% for Native Hawaiians, compared to 16% for the total population. By 1993 the Native Hawaiian prevalence rose to 16% compared to 14% for the total population. Thus Native Hawaiian known prevalence increased and the total population prevalence declined during the period. Again, this may be correlated with the prevalence of overweight and some of the same efforts may be efficacious, along with greater attention to screening and prevention.

In 1991, 48% of women in the general population said they had a mammogram; this increased to 55% by 1993. Percentages for Native Hawaiian women also increased during the period, in 1991, 42% said they had a mammogram and by 1993, 46% said they had. This indicates progress in breast cancer screening for Native Hawaiians, although there is still need for more effort.

In 1991 over 87% of Native Hawaiians and total population women said they had ever had a breast clinical examination; however, by 1993, the percentage dropped slightly to 86% for Native Hawaiians and for total population women. Native Hawaiian women are doing well in this regard and appear to be using cancer screening effectively. It is necessary, however, to emphasize the need for continued screening in order for it to be effective.

In 1991, 95% of total women said they had ever had a pap smear test, compared to 94% of Native Hawaiian women. By 1993 of total women and 95% of Hawaiian women reported having a pap smear test, showing an increase in the percentage of Hawaiian women participating in this form of cancer screening. Native Hawaiian women are doing exceptionally well in obtaining pap smear tests. It is good to emphasize the need to continue to have pap smear test in order to detect cervical cancer early.

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The major headings are:

HEALTH, GENERAL
HEALTH, WOMEN'S
HEALTH, CANCER
HEALTH, KŪPUNA (ELDERLY HAWAIIAN)
HEALTH, VITAL STATISTICS (BIRTH, DEATH, AND MARRIAGE)
HEALTH, CHILDREN
EDUCATION
HOUSING
ECONOMICS
CRIME
BLOOD QUANTUM (COVERING STUDIES ON PERCENTAGE OF BLOOD
QUANTUM AND STUDIES COMPARING FULL AND PART-HAWAIIANS)

HEALTH, GENERAL

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Native Hawaiian and general infant mortality rates as 5-year averages (1956-90) and detailed graphs from 1980-90
Infant mortality rates for major ethnic groups in Hawaii 1989-90
Infant mortality for Hawaiian infants by maternal Hawaiian/non-Hawaiian ethnicity (1980-90)
Percent of births at low birthweight for major ethnic groups (1990) and (1950-90)
Percent of births in which prenatal care started after first trimester (1963-90)
Rate of late and no prenatal care by ethnicity (1990)
Maternal risk factors reported by women whose babies had a diagnosed birth defect (1989-91)
Hawaiian infant deaths by age of mother (1989)
Births to women under the age of 20 (1962-90)
Pregnancy rates by outcome for women 15-19
Pregnancies and births to women under age 18 and under 20 by ethnicity of mother (1990)
Births to unmarried women in Hawaii and the United States (1962-90)
Drug use, alcohol use among all DOE and DOE Hawaiian students in 12th grade (1987, 1989, and 1991)

HEALTH, VITAL STATISTICS (BIRTH, MARRIAGE, AND DEATH)

OHA, *Native Hawaiian Data Book 1998*. The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime; and income and employment.

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Department of Health, Office of Health Status Monitoring, *Vital Signs Hawai'i: 1994 Supplement* (May 1996). Contains ethnic breakdowns for: number of suicides, limitations of activities (for the disabled), smokers, infant mortality rate, and pregnancy. [Note that the counterpart published in 1994 covering the years since 1990 contained no breakdowns by ethnic group.]

Papa Ola Lōkahi, *Native Hawaiian Health Data Book* (1992). This source contains information on population demographics, characteristics of pregnancies, mortality, cancer, chronic conditions, risk factors, and services. This book was folded into the Native Hawaiian Data book in 1994.

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David Johnson, "Chapter 5: An Overview of Ethnicity and Health in Hawaii" in *Social Process in Hawaii*. Contains information on ranking of causes of death by ethnic group; age-adjusted death rates by cause, gender, and ethnicity; ranking of age-adjusted rates of chronic conditions by ethnicity; age-adjusted prevalence of chronic conditions by gender and ethnicity; and effects of morbidity, Native Hawaiians compared to total Hawai'i resident population.

Kathryn L. Braun et al., "Age-Specific Native Hawaiian Mortality: A Comparison of Full, Part, and Non-Hawaiians," in *Asian American and Pacific Islander Journal of Health*, Vol. 4, No. 4 (Autumn 1996). Updates the 1982 Look study on mortality rates for full-, part-, and non-Hawaiians, focussing on 1980 and 1990 figures. Includes graphs on all-cause, heart disease, and malignant neoplasm mortality. The data show that part-Hawaiians have a higher rate than non-Hawaiians, and full-Hawaiians have a higher rate than part-Hawaiians.

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1990. Differs from the previous paper by breaking down the category of malignant neoplasm to cancers of breast, lung/bronchial, and colon/rectum.

Haiou Yang et al., *Life Expectancy in the State of Hawai'i: 1980 and 1990*, Office of Health Status Monitoring, Department of Health, R & S Report Issue No. 63 (August 1996). Sets forth tables of life expectancy by ethnic group and gender. Makes important points: the value of life expectancy as a tool for planning (at 3); the difference between the default census approach in 1970 and 1990 (at 5); why life expectancy data looks better for Hawaiians when DOH data is used (as compared to the Census) (at 12); and the complexity of ethnic data in Hawai'i.

Mele Look et al., "Health of Hawaiian Women," (1998) (unpublished at the time this report was prepared). This paper compares the health status of wahine kanaka maoli to women of other ethnic groups in Hawai'i for life expectancy, heart disease, cancer incidence, cancer mortality, reproductive health, pregnancy outcomes, teen births, prenatal care, and breast-feeding.

David B. Johnson et al., "Papa Ola Lōkahi Hawaiian Health Update: Mortality, Morbidity, Morbidity Outcomes and Behavioral Risks," presented to Papa Ola Lōkahi on March 1, 1996. This manuscript is part of the E Ola Mau Update Project of Papa Ola Lōkahi. Health records for the periods 1980-86 and 1989-91 were compared for the major ethnic groups in Hawai'i, as well as part-Hawaiians and pure Hawaiians. Categories compared were overall mortality, the top five mortality conditions, mortality conditions related to circulatory disease, mortality conditions relating to malignant neoplasms (cancer), percentage increases from 1980-86 to 1989-91 for the top ten causes of death, overall morbidity rates, top ten chronic conditions, cancer incidence 1988-92, behavioral risks, and women's health screening.

E.C. Kieffer et al., "The perinatal and infant health status of Native Hawaiians," in *American Journal of Public Health*, Vol. 84 No. 9 (Sept. 1994) at 1501. This article compares the status of children born to Caucasian, part-Hawaiian, and full-Hawaiian mothers. Part-Hawaiian women were included for the following reason: "In this analysis, the category Hawaiian includes mothers with any Hawaiian ancestry, following common practice in the state." At 1501. Uses Health Status Monitoring data.

Office of Program Evaluation and Planning, Kamehameha Schools Bernice Pauahi Bishop Estate, *Native Hawaiian Educational Assessment 1993*.

Hawaiian infant deaths by age of mother (1989)
Births to women under the age of 20 (1962-90)
Pregnancy rates by outcome for women 15-19
Pregnancies and births to women under age 18 and under 20 by ethnicity of mother (1990)
Births to unmarried women in Hawaii and the United States (1962-90)

HEALTH, WOMEN'S

OHA, *Native Hawaiian Data Book 1998*. The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime; and income and employment

Research and Statistics Unit, ALU LIKE, Inc., and Social Sciences Research Institute, UH Manoa, *Profile of Hawaiians in the 1980 Decennial Census for Oahu Island* (September 1984). This report modified the census tables as adjusted based on data from the State Health Survey. The report notes that the disparity in reporting of Hawaiians between the census and the health survey is 57,658: 1980 census, 118,251; 1981 Health Survey 175,909. Id. at xi. Info collected is on:

Sex by age
Sex by age for years of school completed
Median years of school completed by sex and age
Median personal income in 1979 by sex by age
Sex by labor force status and inmate status
Sex by age by labor force status
Sex by industry by class of worker
Sex by occupation
Sex by labor force status

David Johnson, "Chapter 4: Data Sources and Methodology" in *Social Process in Hawaii*. HSP demographic data included composition of household,

number of persons, relationship, marital status, income, area of residence, age, gender, ethnicity, years of education, occupation, and employment status.

Department of Health, *Biennial Report for 1991 and 1992 – Vital Statistics Supplement* (1994) (prior to this report, the statistics were contained in the DOH annual reports). The appendix contains ninety-five charts of health statistics, broken down by ethnic group for each of the years in question, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

Department of Health, *Report for the Year 1993 – Vital Statistics Supplement* (1995). The text lists ethnic breakdowns for incidence of and mortality from breast cancer and population age 65 or older for the years 1963 through 1993. The appendix contains ninety-five charts of health statistics, broken down by ethnic group, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

Department of Health, Office of Health Status Monitoring, *Report for the Year 1993 - Vital Statistics Supplement* (1995). The text contains HIV deaths by race. The appendix contains ninety-five charts of health statistics, broken down by ethnic group, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

Department of Health, Office of Health Status Monitoring, *Vital Statistics Supplement 1995* (April 1997). The text contains several charts on infant mortality rate for Hawaiians by island, 1991-1995. The appendix contains ninety-five charts of health statistics, broken down by ethnic group, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

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David Johnson, "Chapter 5: An Overview of Ethnicity and Health in Hawaii" in *Social Process in Hawaii*. Contains information on ranking of causes

of death by ethnic group; age-adjusted death rates by cause, gender, and ethnicity; ranking of age-adjusted rates of chronic conditions by ethnicity; age-adjusted prevalence of chronic conditions by gender and ethnicity; and effects of morbidity, Native Hawaiians compared to total Hawai'i resident population.

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J.M. Mor et al., "Determinants of prenatal care use in Hawaii: implications for health promotion," in *American Journal of Preventative Medicine*, Vol. 11, No. 2 (Mar.-Apr 1995) at 79.

E.C. Kieffer et al., "Pregnancy Outcomes of Pacific Islanders in Hawaii," in *American Journal of Epidemiology*, Vol. 141, No. 7 (April 1, 1995) at 674. This article looks at the outcomes of pure-Hawaiian mothers and Samoan mothers. Part-Hawaiian women were not studied: "Women who designated themselves as part-Hawaiian were not included in this study because of the cultural, socio-

economic, and genetic diversity of this much larger group in comparison with the relatively homogeneous Samoan and unmixed Hawaiian population.” At 675. Uses Health Status Monitoring data.

Office of Program Evaluation and Planning, Kamehameha Schools Bernice Pauahi Bishop Estate, *Native Hawaiian Educational Assessment 1993*.

Native Hawaiian marriages by ethnicity of bride and groom
Percent of births in which prenatal care started after first trimester (1963-90)
Rate of late and no prenatal care by ethnicity (1990)
Maternal risk factors reported by women whose babies had a diagnosed birth defect (1989-91)
Hawaiian infant deaths by age of mother (1989)
Births to women under the age of 20 (1962-90)
Pregnancy rates by outcome for women 15-19
Pregnancies and births to women under age 18 and under 20 by ethnicity of mother (1990)
Births to unmarried women in Hawaii and the United States (1962-90)

HEALTH, INFANTS AND CHILDREN

OHA, *Native Hawaiian Data Book 1998*. The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime; and income and employment.

Department of Health, *Biennial Report for 1991 and 1992 – Vital Statistics Supplement* (1994) (prior to this report, the statistics were contained in the DOH annual reports). The appendix contains ninety-five charts of health statistics, broken down by ethnic group for each of the years in question, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

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Office of Program Evaluation and Planning, Kamehameha Schools Bernice Pauahi Bishop Estate, *Native Hawaiian Educational Assessment 1993*.

Native Hawaiian and general infant mortality rates as 5-year averages (1956-90) and detailed graphs from 1980-90
Infant mortality rates for major ethnic groups in Hawaii 1989-90
Infant mortality for Hawaiian infants by maternal Hawaiian/non-Hawaiian ethnicity (1980-90)
Percent of births at low birthweight for major ethnic groups (1990) and (1950-90)
Percent of births in which prenatal care started after first trimester (1963-90)
Rate of late and no prenatal care by ethnicity (1990)
Maternal risk factors reported by women whose babies had a diagnosed birth defect (1989-91)
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Pregnancy rates by outcome for women 15-19
Pregnancies and births to women under age 18 and under 20 by ethnicity of mother (1990)
Births to unmarried women in Hawaii and the United States (1962-90)
Confirmed cases of abuse and neglect by ethnic group (1975-89)
Drug use, alcohol use among all DOE and DOE Hawaiian students in 12th grade (1987, 1989, and 1991)

EDUCATION, CHILDREN

OHA, *Native Hawaiian Data Book 1998*. The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime; and income and employment.

ALU LIKE, *Native Hawaiian Data from OEO 1975 Census Update Survey*.

Education

Highest grade completed for population age 6 and older by district

Highest grade completed for population age 18 and older by district

Highest grade completed for population 25 and older by district

High school graduation among population 25 and older by district

Student status of population 3 through 34 by district

Research and Statistics Unit, ALU LIKE, Inc., and Social Sciences Research Institute, UH Manoa, *Profile of Hawaiians in the 1980 Decennial Census for Oahu Island* (September 1984). Info collected includes:

Education

School enrollment by type of school

Sex by age for school children

Sex by age for years of school completed

Office of Program Evaluation and Planning, Kamehameha Schools Bernice Pauahi Bishop Estate, *Native Hawaiian Educational Assessment 1993*.

Educational data in tables:

Ethnicity of DOE students 1980-81 and 1992-93

Ethnicity by DOE district

Native Hawaiian students in the DOE SY 1983-84 through 1992-93

Hawaiian student population, SY 1992-93

Percentile ranks on PPVT-R (standardized test) by major ethnic groups in Hawaii (1982, 1988, 1989)

Hawaiian student performance on the PPVT-R (1983)

Total reading percentiles for major ethnic groups (1992)

Total reading achievement curves for major ethnic groups (1992)

Hawaiian total reading achievement curves by grade level (1992)

Total math percentiles for major ethnic groups (1992)

Total math percentiles for major ethnic groups (1992)

Total math stanine distributions for Hawaiians (1992)

Science percentiles for major ethnic groups (1992)

Science stanine distributions for major ethnic groups (1992) and for Hawaiians (1992)

Social science percentiles for major ethnic groups (1992)

Social science stanine distributions for major ethnic groups (1992) and for Hawaiians (1992)

Total reading and total math percentiles for total DOE and Hawaiian students (1983, 1992)

Total reading stanine distributions for 8th grade Hawaiian students (1983, 1992)

Total math stanine distributions for 10th grade Hawaiian students (1983, 1992)

Reading comprehension for Hawaiians in private schools (6th grade, 7th grade)

Math computations for Hawaiians in private schools (6th grade, 7th grade)

Status of DOE and Hawaiian students graduating in SY 1991-92

DOE and Hawaiian Students withdrawing from school by withdrawal category (SY 1991-92)

DOE students with excessive absences by ethnic group, grades 6-12 (SY 1991-92) (multiple charts)

DOE students retained in grade, by ethnic background, grades K-12 (SY 1991-92)

High school completion by adults 25 and older, by major ethnic group (1940-90)

Completion of four or more years of college by selected ethnic background (1940-90)

Hawaiian enrollment in UH system and projections through 2000

BLOOD QUANTUM (COVERING STUDIES ON PERCENTAGE OF BLOOD QUANTUM AND STUDIES COMPARING FULL AND PART-HAWAIIANS)

OHA, *Native Hawaiian Data Book 1998*. The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime; and income and employment

OHA, *Population Survey/Needs Assessment: Final Report* (June 1986). This is apparently the only primary research that OHA has done. Its most significant data is the calculation of Hawaiians by amount of Hawaiian blood (blood quantum) in three categories: 100%, 50% or more, and less than 50%. Other data include: a list of problems experienced by the respondents and sources of help, and satisfaction with services, education, self-sufficiency and work, housing, jobs, land tenure, Hawaiian lifestyle, Hawaiian rights, and Hawaiian culture. All of this data is dated, being over 14 years old. Still, while the social data may change, the blood quantum study is still considered valuable as a snapshot of the Hawaiian people. It may be used as data to extrapolate information about the future existence of Hawaiians. The federal Office of Technology Assessment performed a 55-year data projection (see citation immediately below) on the number of Hawaiians and blood quantum.

“Current Health Status and Population Projections of Native Hawaiians Living in Hawaii,” staff paper prepared by the Health Program, Office of Technology Assessment, U.S. Congress, April 1987 (copy on file at the LRB Library): This older study gives 55-year data projections on number of Hawaiians by age, gender, and blood quantum (note that it labeled Hawaiians with less than 1/8th Hawaiian blood as “Non-Native Hawaiians” and does not include them in all projections; note also the report’s own cautions about data overestimations due to assumptions about out-migration).

Richard Kekuni Blaisdell, “The Health Status of Kanaka Maoli,” in *Asian American and Pacific Islander Journal of Health*, Vol. 1, No. 2 (Autumn 1993). A well-researched secondary source, with some data of pure as well as part-

Hawaiians, in the areas of population, geographic distribution, gender and age, family and household, education, occupations, income, life expectancy, mortality (including comparative data on heart disease, cancer, cerebrovascular disease, accidents, diabetes, bronchitis/ emphysema/ asthma), maternal and child health (including birth rate, infant mortality, congenital defects, illegitimate births, and pregnancy process and outcomes), morbidity (arterial hypertension, asthma/bronchitis/emphysema), heart disease, diabetes, cancer, and dental caries), various risk factors (non-use of seatbelts, obesity, hypertension, smoking, alcohol use, sedentary lifestyle, and cholesterol), mental health (psychological diagnoses, mental retardation, suicide, child abuse, alcohol use and abuse, drug abuse, and crime).

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Kathryn L. Braun et al., "High Mortality Rates in Native Hawaiians," in *Hawaii Medical Journal*, Vol. 54, No. 9 (September 1995). This paper examines the mortality rates for full-Hawaiians, part-Hawaiians, and all races from 1910 to 1990. Differs from the previous paper by breaking down the category of malignant neoplasm to cancers of breast, lung/bronchial, and colon/rectum.

N.E. Aluli, "Prevalence of obesity in a Native Hawaiian population," in *American Journal of Clinical Nutrition*, Vol. 53, 6 Supp. (June 1991) at 1556s.

SMS Research, *Department of Hawaiian Home Lands Beneficiary Needs Study, 1995* (September 1995). Number of Hawaiians in Hawaii and U.S.; number of Hawaiians with blood quantum of 50% or more; number of beneficiaries currently served by DHHL. Lists the following demographic data for DHHL applicants, DHHL lessees, and the state of Hawai'i in general: age, whether there were children in the household, employment status, marital status, type of current home, and tenancy. Lists current household size, the crowding ratio, the shelter-to-income ratio, for DHHL applicants, Hawaiians living in Hawai'i, and all ethnicities in Hawai'i. There is considerable additional data as it related to the lessees use of the land and the applicants' applications.

HEALTH, CANCER

OHA, *Native Hawaiian Data Book 1998*. The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime; and income and employment.

Health

Department of Health, *Biennial Report for 1991 and 1992 – Vital Statistics Supplement* (1994) (prior to this report, the statistics were contained in the DOH annual reports). The appendix contains ninety-five charts of health statistics, broken down by ethnic group for each of the years in question, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

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Department of Health, Office of Health Status Monitoring, *Vital Statistics Supplement 1995* (April 1997). The text contains several charts on infant mortality rate for Hawaiians by island, 1991-1995. The appendix contains ninety-five charts of health statistics, broken down by ethnic group, including: detailed information on births, congenital anomalies, fetal deaths, elective abortions, pregnancies, deaths, causes of death, infant deaths, marriages, and divorces.

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Department of Health, Office of Health Status Monitoring, *Health Surveillance Survey: Report for Years 1989-1992* (January 1996). Contains ethnic breakdowns for malignant neoplasms (cancer), diabetes, heart conditions, hypertension, asthma, acute conditions, and chronic conditions.

Department of Health, Office of Health Status Monitoring, *Vital Signs Hawai'i : 1994 Supplement* (May 1996). Contains ethnic breakdowns for: number of suicides, limitations of activities (for the disabled), smokers, infant mortality rate, and pregnancy. [Note that the counterpart published in 1994 covering the years since 1990 contained no breakdowns by ethnic group.]

Department of Health, Office of Health Status Monitoring, *Vital Signs Hawai'i: Key Indicators of Health Status in Hawaii, 1995 Supplement* (March 1997). Presents breakdowns for lung cancer deaths, murder victims, obesity, and activity limitations due to impairment of the back and spine.

Papa Ola Lōkahi, *Native Hawaiian Health Data Book* (1992). This source contains information on population demographics, characteristics of pregnancies, mortality, cancer, chronic conditions, risk factors, and services. This book was folded into the Native Hawaiian Data book in 1994.

Richard Kekuni Blaisdell, "The Health Status of Kanaka Maoli," in *Asian American and Pacific Islander Journal of Health*, Vol. 1, No. 2 (Autumn 1993). A well-researched secondary source, with some data of pure as well as part-Hawaiians, in the areas of population, geographic distribution, gender and age, family and household, education, occupations, income, life expectancy, mortality (including comparative data on heart disease, cancer, cerebrovascular disease, accidents, diabetes, bronchitis/ emphysema/ asthma), maternal and child health (including birth rate, infant mortality, congenital defects, illegitimate births, and pregnancy process and outcomes), morbidity (arterial hypertension, asthma/bronchitis/emphysema), heart disease, diabetes, cancer, and dental caries), various risk factors (non-use of seatbelts, obesity, hypertension, smoking, alcohol use, sedentary lifestyle, and cholesterol), mental health (psychological diagnoses, mental retardation, suicide, child abuse, alcohol use and abuse, drug abuse, and crime).

Richard Kekuni Blaisdell, "1995 Update on Kanaka Maoli (Indigenous Hawaiian) Health," in *Asian American and Pacific Islander Journal of Health*, Vol. 4, No. 1-3 (Winter-Summer Issue 1996). Updates findings from 1990 to 1995 on mortality, birth rates, and AIDS rates.

Mele A. Look and Kathryn L. Braun, *A Mortality Study of the Hawaiian People 1910-1990* (The Queen's Health Systems 1995). This study compiles and compares detailed data for full-Hawaiians, part-Hawaiians, and all races for the decades 1910 through 1990 for all leading causes of death.

Kathryn L. Braun et al., "Life and Death in Hawaii: Ethnic Variations in Life Expectancy and Mortality, 1980 and 1990," in *Hawaii Medical Journal*, Vol.

55 (December 1996). This study presents life expectancy estimations for Caucasian, Chinese, Filipinos, Japanese, and Native Hawaiians (full and part) for 1980 and 1990, along with ethnic differences in mortality rates for specific causes of death.

David Johnson, "Chapter 5: An Overview of Ethnicity and Health in Hawaii" in *Social Process in Hawaii*. Contains information on ranking of causes of death by ethnic group; age-adjusted death rates by cause, gender, and ethnicity; ranking of age-adjusted rates of chronic conditions by ethnicity; age-adjusted prevalence of chronic conditions by gender and ethnicity; and effects of morbidity, Native Hawaiians compared to total Hawai'i resident population.

Claire Ku'uleilani Hughes, et al., "Diet-Related Cancer in Native Hawaiians," *CANCER Supplement*, Vol. 78, No. 7 (October 1, 1996). This report reviews and integrates literature on cancer among Hawaiians, revealing the extremely high cancer rates for Hawaiians and the most prevalent types of cancer. It suggests a cultural context for Hawaiian health care and consideration for dietary intervention. Note the substantial number of articles listed in the footnotes on Hawaiian health.

Kathryn L. Braun et al., "Age-Specific Native Hawaiian Mortality: A Comparison of Full, Part, and Non-Hawaiians," in *Asian American and Pacific Islander Journal of Health*, Vol. 4, No. 4 (Autumn 1996). Updates the 1982 Look study on mortality rates for full-, part-, and non-Hawaiians, focussing on 1980 and 1990 figures. Includes graphs on all-cause, heart disease, and malignant neoplasm mortality. The data show that part-Hawaiians have a higher rate than non-Hawaiians, and full-Hawaiians have a higher rate than part-Hawaiians.

Kathryn L. Braun et al., "High Mortality Rates in Native Hawaiians," in *Hawaii Medical Journal*, Vol. 54, No. 9 (September 1995). This paper examines the mortality rates for full-Hawaiians, part-Hawaiians, and all races from 1910 to 1990. Differs from the previous paper by breaking down the category of malignant neoplasm to cancers of breast, lung/bronchial, and colon/rectum.

Mele Look et al., "Health of Hawaiian Women," (1998) (unpublished at the time this report was prepared). This paper compares the health status of wahine kanaka maoli to women of other ethnic groups in Hawai'i for life

expectancy, heart disease, cancer incidence, cancer mortality, reproductive health, pregnancy outcomes, teen births, prenatal care, and breast-feeding.

David B. Johnson et al., “Papa Ola Lōkahi Hawaiian Health Update: Mortality, Morbidity, Morbidity Outcomes and Behavioral Risks,” presented to Papa Ola Lōkahi on March 1, 1996. This manuscript is part of the E Ola Mau Update Project of Papa Ola Lōkahi. Health records for the periods 1980-86 and 1989-91 were compared for the major ethnic groups in Hawai‘i, as well as part-Hawaiians and pure Hawaiians. Categories compared were overall mortality, the top five mortality conditions, mortality conditions related to circulatory disease, mortality conditions relating to malignant neoplasms (cancer), percentage increases from 1980-86 to 1989-91 for the top ten causes of death, overall morbidity rates, top ten chronic conditions, cancer incidence 1988-92, behavioral risks, and women’s health screening.

Cancer: the Hawaii Tumor Registry of Hawaii ran special figures for the Bureau on the prevalence of cancer in persons of Hawaiian ancestry. That information is contained in Appendix C.

HEALTH, KUPŪNA (ELDERLY HAWAIIAN)

OHA, *Native Hawaiian Data Book 1998*. The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime; and income and employment

ALU LIKE, Inc., *Dental Health Assessment of Native Hawaiian Elderly* (1996). Based on participants in ALU LIKE’s Ke Ola Pono No Nā Kupuna program.

ALU LIKE, Inc., *Ke Ola Pono No Nā Kupuna Special Studies* (1997). Report presented by Dr. David Johnson of PHRI of annual health evaluations of Hawaiian elders.

ALU LIKE, Inc., *The Native Hawaiian Elderly Needs Assessment Report* (1990).

Kathryn L. Braun et al., "Life and Death in Hawaii: Ethnic Variations in Life Expectancy and Mortality, 1980 and 1990," in *Hawaii Medical Journal*, Vol. 55 (December 1996). This study presents life expectancy estimations for Caucasian, Chinese, Filipinos, Japanese, and Native Hawaiians (full and part) for 1980 and 1990, along with ethnic differences in mortality rates for specific causes of death.

Kathryn L. Braun et al., "Age-Specific Native Hawaiian Mortality: A Comparison of Full, Part, and Non-Hawaiians," in *Asian American and Pacific Islander Journal of Health*, Vol. 4, No. 4 (Autumn 1996). Updates the 1982 Look study on mortality rates for full-, part-, and non-Hawaiians, focussing on 1980 and 1990 figures. Includes graphs on all-cause, heart disease, and malignant neoplasm mortality. The data show that part-Hawaiians have a higher rate than non-Hawaiians, and full-Hawaiians have a higher rate than part-Hawaiians.

Haiou Yang et al., *Life Expectancy in the State of Hawai'i: 1980 and 1990*, Office of Health Status Monitoring, Department of Health, R & S Report Issue No. 63 (August 1996). Sets forth tables of life expectancy by ethnic group and gender. Makes important points: the value of life expectancy as a tool for planning (at 3); the difference between the default census approach in 1970 and 1990 (at 5); why life expectancy data looks better for Hawaiians when DOH data is used (as compared to the Census) (at 12); and the complexity of ethnic data in Hawai'i.

HOUSING

OHA, *Native Hawaiian Data Book 1998*. The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime; and income and employment..

ALU LIKE, *Native Hawaiian Data from OEO 1975 Census Update Survey*. This extremely comprehensive survey, broken down into full and part-Hawaiians, collects data in eight major categories: population structure, residence in Hawai'i, education, personal income, employment, housing costs, and housing characteristics. Each of these major categories is broken down into exhaustive detail.

Housing costs

- Owner occupancy and renter occupancy by district

- Total monthly housing costs for owner-occupied units by district

- Monthly maintenance costs for units rented for cash rent by district

- Leasehold or fee simple ownership of units by district

- Monthly lease rent for owned-occupied leasehold units

- Total monthly rent for units rented for cash rent by district

- Monthly utilities cost for units rented for cash rent by district

- Owners of units rented by households or occupied without cash rent by district

Housing characteristics

- Number of rooms per unit per district

- Number of bedrooms unit per district

- Availability of hot and cold running water by district

- Availability of complete kitchen facilities for unit by district

- Type of housing units per district

- Number of floors in the housing structure by district

- Presence of passenger elevator in the structure by district

- Units per structure per district

- Condition of housing units by district

Research and Statistics Unit, ALU LIKE, Inc., and Social Sciences Research Institute, UH Manoa, *Profile of Hawaiians in the 1980 Decennial Census for Oahu Island* (September 1984):

Housing

Household income in 1979 by tenure

Median household income in 1979 by tenure

Aggregate household income in 1979 by tenure

Tenure by persons in unit

Tenure (persons in occupied housing units)

Tenure by median persons in unit

Tenure by median rooms per unit

Household income in 1979 by number of persons in unit

Household income in 1979 by percentage of income spent on gross rent

Gross monthly rent

Mortgage status and selected monthly owner costs.

OHA, *Population Survey/Needs Assessment: Final Report* (June 1986).

This is apparently the only primary research that OHA has done. Its most significant data is the calculation of Hawaiians by amount of Hawaiian blood (blood quantum) in three categories: 100%, 50% or more, and less than 50%. Other data include: a list of problems experienced by the respondents and sources of help, and satisfaction with services, education, self-sufficiency and work, housing, jobs, land tenure, Hawaiian lifestyle, Hawaiian rights, and Hawaiian culture.

SMS Research, *Department of Hawaiian Home Lands Beneficiary Needs Study, 1995* (September 1995). Number of Hawaiians in Hawaii and U.S.; number of Hawaiians with blood quantum of 50% or more; number of beneficiaries currently served by DHHL. Lists the following demographic data for DHHL applicants, DHHL lessees, and the state of Hawai'i in general: age, whether there were children in the household, employment status, marital status, type of current home, and tenancy. Lists current household size, the crowding ratio, the shelter-to-income ratio, for DHHL applicants, Hawaiians living in Hawai'i, and all ethnicities in Hawai'i. There is considerable additional data as it related to the lessees use of the land and the applicants' applications.

The Urban Institute, *Housing Problems and Needs of Native Hawaiians* (1995). This study was based on a special data tabulation from the U.S. Census.

It is unique among census data in that it classifies households as Hawaiian based on whether either the head of household or the spouse is Hawaiian. Figures include: Native Hawaiian and non-Hawaiian households by geographic area (1990); net migrations for Native Hawaiians by area (1985-90); age of state residents as a percentage of all persons, by Hawaiian and non-Hawaiian (1990); households by family status, by Hawaiian and non-Hawaiian (1990); households by size and tenure, by Hawaiian and non-Hawaiian (1990); presence of subfamilies, for Hawaiians and non-Hawaiians (1990); educational attainment for persons 16 or older, by Hawaiians and non-Hawaiians (1990); labor force status for Hawaiians and non-Hawaiians (1990); employment by industry, Hawaiians and non-Hawaiians (1990); income related to area median, by Hawaiians and non-Hawaiians (1989); vacancy and home ownership rates, Hawaiians and non-Hawaiians (1990); age of housing, units in structure, and size of units, for Hawaiians and non-Hawaiians (1990); housing problems (numerous factors), Hawaiians and non-Hawaiians (1990).

ECONOMICS

OHA, *Native Hawaiian Data Book 1998*. The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime; and income and employment.

ALU LIKE, *Native Hawaiian Data from OEO 1975 Census Update Survey*. This extremely comprehensive survey, broken down into full and part-Hawaiians, collects data in eight major categories: population structure, residence in Hawai'i, education, personal income, employment, housing costs, and housing characteristics. Each of these major categories is broken down into exhaustive detail.

Income

Personal

For population 16 or older by district

For population 16 or older by sex

For population 16 or older by marital status

For population 16 or older by highest grade completed

Household and family

Household by district

Household by sex of head of household

Household by size of household
Family by district
Family by sex of head of household
Family by military status of head (all, and all larger than one)
Family by family income

Employment

Employment status of the population 14 and older by district
Employment status of the population 14 and older by age
Employment status of males 14 and older by age
Employment status of females 14 and older by age
Hours worked the previous week
Weeks worked the previous year
Occupation of 16 and older by district
Industry of 16 and older by district
Number of weeks of unemployment by district
Unemployment compensation figures by district
Unemployment among 14 and older by district
Occupation of unemployed population 16 and older by district
Industry of unemployed population 16 and older by district
Occupation of unemployed population 16 and older
Industry of unemployed population 16 or older
Personal income for population 16 or older by employment status

Poverty level classification by district
Education by occupation
Education by industry
Education by employment status
Income by type of ownership

Research and Statistics Unit, ALU LIKE, Inc., and Social Sciences Research Institute, UH Manoa, *Profile of Hawaiians in the 1980 Decennial Census for Oahu Island* (September 1984):

Income

Household income type in 1979
Aggregate household income in 1979 by household income type in 1979
Family income in 1979 by age of householder
Workers in family by family income in 1979
Median and mean family income by number of workers in family in 1979
Aggregate family income by number of workers in family (1979)
Median personal income in 1979 by sex by age
Per capita income by living arrangement (1979)
Poverty status and receipt of public assistance in 1979
Employment
Sex by labor force status and inmate status
Sex by age by labor force status
Sex by industry by class of worker
Sex by occupation
Sex by labor force status
Family type and number of workers in family

ALU LIKE, Inc., *The Demographic, Social, and Economic Studies of Native Hawaiians* (1990), written by Herbert Barringer and Nolan Liu.

David Johnson, "Chapter 4: Data Sources and Methodology" in *Social Process in Hawaii*. HSP demographic data included composition of household, number of persons, relationship, marital status, income, area of residence, age, gender, ethnicity, years of education, occupation, and employment status.

SMS Research, *Department of Hawaiian Home Lands Beneficiary Needs Study, 1995* (September 1995). Number of Hawaiians in Hawaii and U.S.; number of Hawaiians with blood quantum of 50% or more; number of beneficiaries currently served by DHHL. Lists the following demographic data for DHHL applicants, DHHL lessees, and the state of Hawai'i in general: age, whether there were children in the household, employment status, marital status, type of current home, and tenancy. Lists current household size, the crowding ratio, the shelter-to-income ratio, for DHHL applicants, Hawaiians living in Hawai'i, and all ethnicities in Hawai'i. There is considerable additional data as it related to the lessees use of the land and the applicants' applications.

The Urban Institute, *Housing Problems and Needs of Native Hawaiians* (1995). This study was based on a special data tabulation from the U.S. Census.

It is unique among census data in that it classifies households as Hawaiian based on whether either the head of household or the spouse is Hawaiian. Figures include: labor force status for Hawaiians and non-Hawaiians (1990); employment by industry, Hawaiians and non-Hawaiians (1990); income related to area median, by Hawaiians and non-Hawaiians (1989).

CRIME

OHA, *Native Hawaiian Data Book 1998* The major categories of data in the book fall into eight categories: population and vital statistics; housing; land; education; human services; health; crime; and income and employment..

ALU LIKE, Inc., *Criminal Justice and Hawaiians in the 1990s* (1994), written by Gene Kassebaum.

Office of Program Evaluation and Planning, Kamehameha Schools Bernice Pauahi Bishop Estate, *Native Hawaiian Educational Assessment 1993*.

Confirmed cases of abuse and neglect by ethnic group (1975-89)

Drug use, alcohol use among all DOE and DOE Hawaiian students in 12th grade (1987, 1989, and 1991)

Number of juvenile arrests, total and Hawaiian (1980-92) (also arrest rates)