

SURVEY OF POPULATION DATA
TO SEE IF NUMBER OF INDIVIDUALS WHO ARE ELIGIBLE
FOR MEDICAL ASSISTANCE CAN BE DETERMINED

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PREFACE

This report is made in compliance with the directive of Conference Committee Report No. 3, Fourth Legislature, Budget Session, 1968, State of Hawaii. It has broader implications with respect to useful information for planning governmental programs. If government exists to provide for its people, accurate information about its people can be helpful and often most essential in planning programs for the future.

How accurate is the population statistics for the State of Hawaii? How useful is the population statistics being gathered in Hawaii? Specifically, do statistics exist which can ascertain the number of people who are eligible for assistance under the State medical aid program but who are not now receiving such assistance?

The researchers consented to undertake this study with a great deal of reluctance because of its amorphousness. Further, the researchers suspected lack of currency in population statistics and lack of agreement among statisticians.

The researchers acknowledge with thanks the information provided by Mr. Jack Wakayama and his staff at the State Department of Social Services, Mr. Charles Bennett and his staff at the State Department of Health, and Mr. Robert C. Schmitt and his staff at the State Department of Planning and Economic Development.

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SUMMARY

Current detailed population information for the State of Hawaii does not exist. The most recent detailed population information for Oahu was obtained by the State Department of Health in its Health Surveillance Program survey which was concluded in May, 1967.

As far as can be ascertained no systematic procedure is being followed in fully up-dating the detailed population statistics obtained by the U. S. Bureau of the Census.

The State Department of Social Services reports that about 4% of the State population is receiving economic assistance including medical aid. Application of State Department of Social Services Assistance Standard (Income Level by Size of Family Group) to the U. S. Bureau of the Census statistics for 1960 reveals that nearly 14% (87,330 people) of the population of Hawaii (including military) in 1960 was eligible for economic assistance. Applying the same procedure to State Department of Health, Health Surveillance Program survey for Oahu reveals that just over 11% (69,370 people) of the civilian (excluding military) population of Hawaii in 1965 was eligible for economic assistance. Based on these figures, another seven to ten per cent of the population of this State are eligible for economic assistance, and hence medical aid.

Whether such lack of medical aid has affected their health and welfare cannot be ascertained within the scope of this study, as it was based on analysis of most relevant data available. To obtain data on impact of medical assistance or lack of medical assistance would require a much more extensive research requiring information directly from people who are eligible but are not now receiving such assistance.

I. INTRODUCTION

The Fourth Legislature, Budget Session, 1968, State of Hawaii, in its Conference Committee Report No. 3, directed the Legislative Reference Bureau

" . . . to determine to the extent possible the number of individuals who are eligible for assistance under the State medical aid program but who are not now receiving such assistance, and whether the lack of such assistance to these individuals has materially affected their health and welfare."

The data sought were made available from population studies and within eligibility standards established by the Department of Social Services for the categories of assistance programs.

A major factor which bears on the problem at hand is the relative economic activity within the State.

This report has been prepared to indicate the nature of demographic data available in the State of Hawaii and whether the data can be used to ascertain the number of individuals who are eligible for assistance under the State medical aid program.

II. SOURCES OF POPULATION DATA

In the State of Hawaii, population data are gathered and maintained by several State agencies and by the United States Department of Commerce, Bureau of the Census. Among demographers the decennial census of the United States as taken by the Bureau of the Census is generally accepted as the base estimate.

Bureau of the Census Data

When the Bureau of the Census takes the census of the population, every housing unit is visited by a census enumerator. At each occupied unit the enumerator obtains information for each member of the household by five characteristics:

1. age
2. sex
3. marital status
4. color
5. relationship to the head of the household

The enumerator also obtains information about the housing unit on ten characteristics.

Additional information about people is obtained from every fourth housing unit (25% sample).

The latest data available from the Bureau of the Census was obtained in 1960. Information is available on size of family and income earned. Data are found in the Bureau of the Census publication "United States Census of Population 1960, Hawaii, Detailed Characteristics."

Department of Health Data

The State Department of Health population data are perhaps the most current available in the State of Hawaii. The Department of Health updates population statistics by recording vital processes (births and deaths) and migration (in and out) in the State of Hawaii.

The method is sound and is generally used by demographers in maintaining population statistics. Since all births and deaths must be reported to the Department of Health, the changes in population size due to these causes are accurately reflected. Migration apparently poses a problem for the Department of Health. The Department of Health relies on common carriers to report in and out migration of people. The data submitted by the airlines and steamship companies govern the accuracy of the statistics maintained. Movement of people by military carriers must also be included in deriving statistics.

The statistics maintained on the basis of vital processes and migration by the Department of Health do not include datum on income.

Health Surveillance Program

The Hawaii Health Surveillance Program was begun in May, 1964 and continued for three years. It was a continuing monthly health survey of the resident population of the Island of Oahu.

The survey was conducted on the basis of monthly samples drawn from a list of electric light meters. A monthly sample consisted of about 230 addresses to which electric power bills were sent.

The survey was carried out for three years and the data were tabulated. As far as could be ascertained in discussions with Department of Health personnel, formal reports have been published of the survey findings in some select informational areas.

An important objective of the surveillance program was to produce up-to-date demographic data between decennial census years.

Honolulu Redevelopment Agency Data

The Honolulu Redevelopment Agency periodically publishes a statistical and analytical report on housing in the City and County of Honolulu. The data presented in the report are compilations and consolidations of statistics gathered and maintained by other agencies, both public and private.

For the purposes of this study the data on income of families are pertinent. In terms of this definition the Honolulu Redevelopment Agency uses the statistics obtained in the State Department of Health, by the Health Surveillance Program survey, to report incomes of families on Oahu. To report income of families for Neighbor Island counties, statistics obtained from the Vocational Rehabilitation Plan sample survey is presented.

Department of Planning and Economic Development Data

The State Department of Planning and Economic Development has a publication entitled The State of Hawaii Data Book published annually. The second edition was published in June, 1968. This publication is a compilation of statistical data covering a broad range of demographic and economic matters.

For the purpose of this study, family income is pertinent. The State of Hawaii Data Book has three pages of data on income. The statistical tables on family income present data which are categorized by gross annual income and the total number and percentage of families within the income groupings.

Presented herewith is Table 25 from The State of Hawaii Data Book:

Table 25 -- PERCENTAGE DISTRIBUTION OF FAMILY INCOME, BY COUNTY: 1967				
Yearly Income	Percent of Families			
	City-County of Honolulu ¹	Hawaii County	Kauai County	Maui County
TOTAL	100.0	100.0	100.0	100.0
Under \$2,000	3.2	9.7	6.5	9.7
\$2,000 to \$2,999	4.4	5.7	5.0	4.0
\$3,000 to \$3,999	6.4	8.1	10.2	6.1
\$4,000 to \$4,999	9.5	11.9	11.4	10.6
\$5,000 to \$6,999	18.2	16.9	19.9	19.7
\$7,000 to \$9,999	23.7	18.4	21.9	22.9
\$10,000 to \$14,999	23.2	14.3	16.4	16.9
\$15,000 and over	11.4	10.0	6.4	8.3
Not reported	-	5.1	2.4	1.8
Median	\$8,046	\$6,446	\$6,579	\$6,904

1. Represents summary of data collected during the three-year period, April 1964 - March 1967.

Source: Department of Planning and Economic Development, Income of Oahu Families by Census Tract, 1964-1967 and Population Characteristics of the Neighbor Islands.

Summary of Population Statistics

The search to obtain population statistics was, by no means, thorough and complete. The sources cited above are perhaps the most useful for the purposes of this study.

The statistics presented by the Bureau of the Census are most accurate at the time of presentation. However, the data obtained are not up-dated. Hence, the most recent Bureau of the Census information was obtained beginning in April, 1960. The statistics are nine years old.

The State Department of Health does up-date the Bureau of the Census information by including data from vital processes (birth and death) and migration. The accuracy of vital processes data may be accepted because of legal reporting requirements. The migration (in and out of the State) information is subject to the degree of accuracy in reporting by the steamship companies and airlines.

Both the Honolulu Redevelopment Agency data and Department of Planning and Economic Development data are compilation of statistics obtained by other agencies, public and private.

A good illustration of the difficulty in estimating population was presented in an article in the Honolulu Star-Bulletin of Thursday, December 5, 1968, on page B-12. The headline reads "Census Bureau, State Settle Population Dispute." The gist of the article is that the Bureau of the Census and the State of Hawaii used different methods in estimating population size and there was a difference of over 45,000 people in the estimate of the two. The Bureau of the Census and the State of Hawaii has agreed that for 1967 and 1968, estimates will be an average of the two previously competing series. In the future population estimates will be derived by using methods which are mutually agreed upon.

III. STANDARDS OF ELIGIBILITY FOR ECONOMIC ASSISTANCE

For the purpose of this study economic assistance will mean those programs administered by the State Department of Social Services through its Public Welfare Division. The programs although administered by the State government are partially subsidized by the Federal government.

This study looks into one aspect of economic assistance, namely medical aid. Medical aid, however, is an integral part of all economic assistance programs. In a discussion of medical aid it is essential to remember that there are two bases for its provisions:

1. Medicaid - is an integral part of other assistance programs. These assistance programs are as follows:
 - a) Aid to the Aged Blind and Disabled (AABD)
 - b) Aid and Services to Families with Dependent Children (AFDC)
 - c) General Assistance (GA)
 - d) Child Welfare Foster Care Payment program
2. Medical Assistance Only - for those people with marginal income.

Who Is Eligible For Economic Assistance

The population of the State of Hawaii is estimated to be about 775,000. From among all these people, who is eligible for economic assistance?

There are the obvious - the blind, the disabled, the fatherless child. The Department of Social Services has established criteria to ascertain who is eligible for economic assistance. The criteria include many factors. A single factor, blindness, makes a person eligible.

However, in order to attempt to project the total number of people who could be eligible for economic assistance a more generic criterion is needed. Such a criterion is yearly income according to size of family group. The yearly income is calculated according to requirements for food, rent, utilities, education supplies and so on including medical care. The following table presents the "Department of Social Services Standard for Those Cooking at Home, Effective - July 1, 1968":

TABLE I: DSS' ASSISTANCE STANDARD FOR THOSE COOKING AT HOME
Effective - July 1, 1968

<u>No. of People in Family</u>	<u>Annual Income DSS Standard</u>
1	\$1,476
2	2,400
3	2,712
4	3,192
5	3,624
6	4,032
7	4,572
8	5,004
9	5,388
10	5,784
11	6,264
12	6,583

The term "Cooking at Home" is used to differentiate from people who are living in institutionalized settings such as nursing homes. The annual income represents the sum of funds required by family size for rent, food, and so on.

IV. IMPACT OF TOTAL STATE ECONOMY

The impact of economic activity in the State has a bearing on the number of people who are eligible for economic assistance:

1. Rising cost of living with increased cost for medical services would tend to encourage eligible people to seek economic assistance.
2. A drop in economic activity with increased unemployment would increase the number of people eligible for economic assistance.
3. Full employment would tend to stabilize the number of people eligible for economic assistance.

The economic activity in the state can be extremely variable. The past decade, following statehood for Hawaii, has been one of full employment and high economic activity. If this trend continues the number of people eligible for economic assistance should remain relatively stable.

V. PREDICTABILITY OF NUMBER OF PEOPLE ELIGIBLE FOR MEDICAL AID

According to the statistics maintained by the Department of Social Services, from three to four per cent of the total population are receiving economic assistance each month (28,000 out of a population of 775,000). During the 1967-1968 fiscal period there were nearly 11,000 new applicants who received economic assistance. New applicants may include repeats of the same individuals who go on and off the public assistance roll during the year. These 11,000 new individuals contributed toward the 28,000 monthly average recipients of economic assistance.

Current Eligibility Standard Applied to 1960 Decennial Census Data

The purpose of this study is to see whether the number of people who are eligible for assistance under the State medical aid program can be ascertained. By using the current Department of Social Services' Assistance Standard and projecting into the population statistics on income found in the "U. S. Census of Population: 1960, Detailed Characteristics, Hawaii," it is found that nearly 14% of the population in 1960 would have been eligible for economic assistance. The projection is made by counting the number of people in the various size families falling within the income level of the Assistance Standards.

Table II which follows presents the computation followed in deriving the number of people who would have been eligible based on 1960 population.

TABLE II: COMPUTATION OF NUMBER OF PEOPLE ELIGIBLE FOR
ECONOMIC ASSISTANCE IN THE STATE OF HAWAII
BASED ON DSS' ASSISTANCE STANDARD
USING POPULATION STATISTICS FROM U. S. CENSUS DATA, 1960*

Size of Family	Number of Families Within Annual Family Income Groups					TOTAL
	Under \$1000	\$1,000 to \$1,999	\$2,000 to \$2,999	\$3,000 to \$3,999	\$4,000 to \$4,999	
2 persons	1,915	1,988	2/5 (2472)			4,892 x 2 = <u>9,784</u>
3 persons	1,310	983	3/4 (1896)			3,715 x 3 = <u>11,145</u>
4 persons	726	654	1334			2,714 x 4 = <u>10,856</u>
5 persons	354	436	821	2/3 (1989)		2,937 x 5 = <u>14,685</u>
6 persons	199	197	597	1345		2,338 x 6 = <u>14,028</u>
7 persons or more	203	240	662	1444	1/2 (1609)	3,354 x 8** = <u>26,832</u>
Total Number of People						87,330

Total Population Reported for State in 1960 632,772

Number of People Eligible for Economic Assistance
Based on DSS' Assistance Standard 87,330

$$\frac{87,330}{632,772} = 13.8\%$$

*U. S. Bureau of the Census, U. S. Census of Population: 1960, Detailed Characteristics, Hawaii, Final Report PC (1)-13D, U. S. Government Printing Office, Washington, D. C., 1962, pg. 13-263.

**Bureau of the Census Data indicates 7 persons or more. Multiplication by 8 is done arbitrarily. The lowest number which could be used is 7, in which case the percentage would be 13.27 instead of 13.8

Most Recent Statistical Data on Family Income and Eligibility Standard

For the Island of Oahu the statistical data obtained from the Department of Health, Health Surveillance Program appear to be most current. This data was obtained over a three-year period starting in April, 1964 and ending in May, 1967.

By using the statistics obtained for the first year of the study, the Research and Statistics Office of the State Department of Health was able to create a table showing family size and income earned. In this table military personnel and their dependents are not included in the count.

Table III, which follows, presents the statistics on population of Oahu by income groupings.

Table IV is a presentation of the computation in determining the number of people who would be eligible for public assistance based on Department of Social Services' Standard of Eligibility and the Health Surveillance Program statistics. Since the number of people is based on Oahu population only, it is necessary to apply the percentage derived for the State of Hawaii. The civilian population for the State of Hawaii in 1965 was estimated to be 624,953 by the Department of Health. 11.1% of the population of the State is 69,370 people, the number who would have been eligible for assistance in 1965.

TABLE III: ESTIMATED NUMBER OF CIVILIAN HOUSEHOLDS AND PERCENTAGE DISTRIBUTION
BY SIZE AND INCOME: OAHU, APRIL 1964 - MAY 1965*

Income	Total	Number of Persons in Household							
		1	2	3	4	5	6	7	8
Under \$2,000	6,487	2,012	1,640	1,427	460	623	101	53	208
2,000-2,999	6,942	1,551	2,000	1,342	711	415	414	308	157
3,000-3,999	8,194	1,344	1,940	1,086	1,191	882	358	615	775
4,000-4,999	9,104	1,137	1,800	1,704	1,860	1,090	672	360	517
5,000-6,999	21,622	1,655	3,180	4,303	4,013	3,339	2,431	1,492	1,191
7,000-9,999	26,970	874	4,060	5,431	5,204	5,086	3,203	1,800	1,386
10,000-14,999	23,670	620	3,380	4,260	5,768	4,377	2,475	1,740	1,083
15,000 +	10,811	207	2,000	1,747	1,693	1,488	1,546	1,132	983
Total	113,800	9,400	20,000	21,300	20,900	17,300	11,200	7,500	6,300
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under \$2,000	5.7	21.4	8.2	6.7	2.2	3.6	.9	.7	3.3
2,000-2,999	6.1	16.5	10.0	6.3	3.4	2.4	3.7	4.1	2.5
3,000-3,999	7.2	14.3	9.7	5.1	5.7	5.1	3.2	8.2	12.3
4,000-4,999	8.0	12.1	9.0	8.0	8.9	6.3	6.0	4.8	8.2
5,000-6,999	19.0	17.6	15.9	20.2	19.2	19.3	21.7	19.9	18.9
7,000-9,999	23.7	9.2	20.3	25.5	24.9	29.4	28.6	24.0	22.0
10,000-14,999	20.8	6.6	16.9	20.0	27.6	25.3	22.1	23.2	17.2
15,000 +	9.5	2.2	10.0	8.2	8.1	8.6	13.8	15.1	15.6
Median income	\$7,513	\$3,846	\$6,644	\$7,438	\$8,277	\$8,363	\$8,524	\$8,542	\$7,667

*From the Health Surveillance Program. Estimates are based on interviews in 2,214 households where the head of household was a civilian. Households with the head in the armed forces were classified as "military."

Prepared by Research Planning & Statistics Office, State Department of Health.

TABLE IV: COMPUTATION OF NUMBER OF PEOPLE ELIGIBLE FOR ECONOMIC ASSISTANCE IN THE STATE OF HAWAII, BASED ON DSS' ASSISTANCE STANDARD USING POPULATION STATISTICS DEVELOPED FROM STATE DEPARTMENT OF HEALTH, HEALTH SURVEILLANCE PROGRAM SURVEY*

Size of Family	Number of Families Within Annual Family Income Groups				TOTAL
	Under \$2,000	\$2,000 to \$2,999	\$3,000 to \$3,999	\$4,000 to \$4,999	
1 person	3/4 (2012)				1509 x 1 = 1,509
2 persons	1,640	2/5 (2000)			2440 x 2 = 4,880
3 persons	1,427	3/4 (1342)			2434 x 3 = 7,302
4 persons	460	711			1171 x 4 = 4,684
5 persons	623	415	2/3 (882)		1626 x 5 = 8,130
6 persons	101	414	358		873 x 6 = 5,238
7 persons	53	308	615	1/2 (360)	1156 x 7 = 8,092
8 persons	208	157	775	517	1657 x 8 = 13,256
Total Number of People					53,091

Total Civilian Population Estimated on July 1, 1964**
in the City and County of Honolulu

478,060

Number of People Eligible for Economic Assistance in the
City and County of Honolulu Based on DSS' Assistance Standard

53,091

$$\frac{53,091}{478,060} = 11.1\%$$

*The statistical information obtained in the Health Surveillance Program survey (a sampling study) for the period April, 1964 to May, 1965 was extended to reflect total population in the City and County of Honolulu. The extension of statistical data was done by Research and Statistics Office, State Department of Health.

**State of Hawaii, Department of Health, Statistical Report, 1964, pg. 3.

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