Health of Japanese Americans in Hawaii

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IN THE Hawaii Health Survey, the household interviews of the National Health Survey program were extended to the island of Oahu for 1 year. Oahu contains about 80 percent of the State's population and constitutes the Honolulu Standard Metropolitan Statistical Area.

The survey was conducted from October 1958 through September 1959. It was a cooperative undertaking of the Hawaii State Department of Health, the Oahu Health Council, and the National Health Survey program of the Public Health Service. Various local organizations and business concerns contributed part of the funds necessary to carry out the project. As on the mainland, the Bureau of the Census selected a sample of households and directed field operations. All instructions to personnel and procedures were identical with those used in the national survey, and the questionnaire, except for minor changes, was the same. The survey included only the civilian noninstitutional population.

"Race," or ethnic group, information in the questionnaire consisted of three categories—Caucasian (white), Japanese, and all other. This report presents findings concerning the Japanese contrasted with the rest of the island's population as a whole and with the population of the United States. The major ethnic groups living on Oahu besides the Japanese are Caucasians, native Hawaiians of Polynesian extraction, Chinese, and Filipinos. Japanese mixed with some other ethnic group were also placed in the "all other" classification.

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Further details concerning the Oahu survey and selected results can be found in National Health Survey report No. 3, series C, entitled "The Hawaii Health Survey."

Historical Sketch

Constituting nearly one-third of Oahu's population in 1960, persons of Japanese ancestry are the largest ethnic group on the island as well as in the State. As indicated in table 1, Caucasians are second in number followed by persons of native Polynesian ancestry, Filipinos, and Chinese. The "all other" category of the table includes smaller groups such as the Koreans, Negroes, Samoans, and Asiatic Indians.

Like the Chinese, Portuguese, Puerto Ricans, Filipinos, and others, the Japanese were first brought to Hawaii to work on large sugar plantations. Although the Japanese began to arrive in large numbers about 1885, it was chiefly those who came in the decade following the annexation of Hawaii by the United States in 1898 who remained and formed the nucleus of the present Japanese population of the islands (*1*). A larger proportion of the earlier immigrants worked for a time, saved their money, and returned to the homeland. The Exclusion Act of 1924 brought an end to all Japanese immigration.

Unlike some of the other immigrant groups, the Japanese were frequently able to bring wives or to send for brides after arrival in Hawaii. Consequently, a normal family condition prevailed among most of the Japanese. Moreover, since women worked in the cane fields along with the men, wives were an important economic asset.

Life on the plantations was hard, with long hours of heavy labor. Nevertheless, conditions for healthful living were present, such as a benign climate, free medical care, and the availability of land for home gardens.

The Japanese proved to be industrious workers, quickly adopted many aspects of American culture, and showed ambition to improve their lot. They were especially eager to take full advantage of educational opportunities for their children.

Today they are no longer a predominantly rural group. Mechanization and other immigrants who arrived later have largely taken their places on the plantations. They are found in every walk of life throughout the social, economic, and political structure of the islands. Their struggles to attain a higher standard of living and acceptance as good Americans have been successful.

The majority of Japanese adults in Hawaii today are nisei, that is, second generation. Their parents were immigrants to the islands. Many of the nisei themselves began life on a plantation. About 23,000, or 15 percent, of the present Japanese population of the State are issei—immigrants from Japan.

A noted demographer has stated that Hawaii is unique among areas of the Pacific and States of the United States in its "complexity and speed of demographic modernization and ethnic assimilation" (*2*). No other ethnic group has contributed more to the celerity of these developments than the Japanese.

Table 1. Civilian population by race, island of Oahu, Hawaii, 1960 [1]

Race	Number	Percent
All races	458, 407	100. 0
Japanese	149, 166	32. 5
Caucasian [2]	139, 814	30. 5
Hawaiian [3]	79, 808	17. 4
Filipino	44, 145	9. 6
Chinese	35, 343	7. 7
All others	10, 131	2. 2

[1] Partly an estimate.
[2] In Hawaii, the term "Caucasian" is used instead of "white."
[3] Persons with any degree of native Polynesian blood.

Measures of Disability

To indicate the extent of disability due to illness and injury, the survey questionnaire provided these measures: days of restricted activity, days in bed, and days lost from work. A day of restricted activity was defined as a day in which a person reduced his usual activity for the whole day; a bed-disability day was a day in which a person was kept in bed either all or most of the day. Obviously, restricted-activity days include all bed-disability days.

A day was counted as lost from work if a person would have been going to work that day but instead lost the entire workday because of illness or injury. This measure was confined to persons 17 years of age and over who reported that they were usually working during the 12 months preceding the week of interview.

These measures serve as yardsticks for comparing the general health level of areas or groups within an area. They constitute a uniquely valuable aspect of the interview type of survey. The most practical way to find out how many bed-disability days members of a family have experienced during a given period is to visit the family and ask.

As shown in table 2, the Japanese manifested far less disability by all three measures than did the other Oahu groups or the U.S. population as a whole. The average number of restricted-activity days among Japanese was 50 percent less than among others on Oahu and 55 percent less than in the country as a whole; bed-disability days were 45 percent less frequent than among either of the other groups. Days were lost from work by Japanese 29 percent less often than by others on Oahu and 25 percent less often than in the nation.

With one exception, disability rates in the three categories for each of the groups being compared were somewhat greater for females than males. The single exception was the slightly higher rate of work-loss days for males among "other Oahu groups."

In the case of restricted-activity days and bed-disability days, the difference between male and female rates for the Japanese was less than for other groups on Oahu or for the United States. On the other hand, for days lost from work, the difference between Japanese males and females

Table 2. Average number of disability days per person per year by sex, Japanese and all other groups on the island of Oahu, September 1958–October 1959, and United States, July 1959–June 1960

Sex	Japanese of Oahu [1]	Other Oahu groups [1]	United States [2]
	Restricted-activity days		
Both sexes	7.3	14.6	16.2
Male	7.2	13.1	14.5
Female	7.3	15.8	17.8
	Bed-disability days		
Both sexes	3.3	6.0	6.0
Male	3.2	5.8	5.4
Female	3.3	6.2	6.6
	Days lost from work [3]		
Both sexes	4.2	5.9	5.6
Male	3.8	6.2	5.4
Female	4.6	5.7	6.0

[1] Age-adjusted on U.S. population, July 1959–June 1960, as estimated in the National Health Survey program.
[2] Basic data from National Health Survey reports B29 and C7.
[3] For usually working persons 17 years of age and over.

was slightly more pronounced. A plausible explanation of why the pattern for work-loss days deviates from that for restricted activity and bed disability is not apparent.

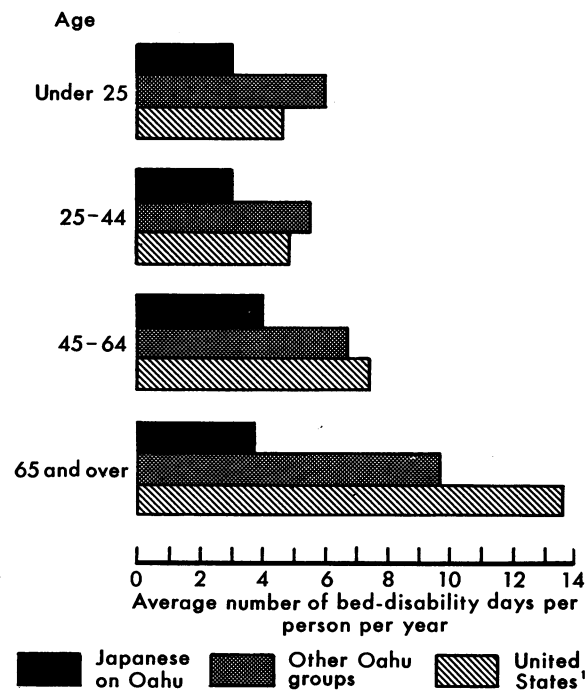
The average number of bed-disability days per person per year by age was lower for the Japanese in each of four age groups, with the greatest differences occurring among persons 65 and over (fig. 1). In this age group, the rate for the Japanese was 62 percent lower than for other Oahu groups and 73 percent lower than for the United States.

Other data in the survey also tend to show that the health level of older Japanese is remarkably high. One possible explanation is that the majority came to Hawaii as immigrant laborers to work on the sugar plantations, and only the most able-bodied were encouraged to come. It may be also that the rigors of living and working on the plantations brought about a selection process whereby the fittest were most likely to survive. For whatever reason, the older generation of Japanese on the islands today appear to be a physically select group. The same can be said also of the older people among certain other ethnic segments of the population, but in this report they are included along with others who did not come to the islands as plantation workers, such as the majority of Caucasians and the native Polynesians.

It is frequently stated that the Japanese exhibit more stoicism in the face of adverse conditions than do some of the other ethnic groups of Hawaii. Possibly this characteristic accounts to some extent for decidedly low disability rates among them. In other words, the Japanese when ill may be less likely than other groups, considered as a whole, to restrict their usual activity, go to bed, or lose time from work.

This hypothesis is equivalent, of course, to saying that reported disability measures differ-

Figure 1. Average number of bed-disability days per person per year by age, Japanese and all other groups on the island of Oahu, October 1958–September 1959, and United States, July 1959–June 1960



[1] From National Health Survey report B29.

ent kinds or degrees of morbidity in different groups. To an extent, this may be true in the present instance; however, the hypothesis hardly explains all of the differences, since mortality rates for the Japanese are also relatively low.

In each age group indicated in table 3, the death rate for Japanese was lower than for other Oahu groups or for the United States as a whole. The greatest percentage difference occurred in the age group 25 to 44 years old; the smallest difference was in the group under 1 year. Other data not shown in table 3 indicate that the infant mortality rate in 1960, that is, the number of deaths under 1 year per 1,000 live births, was 20.9 for the Japanese, 22.0 for others on Oahu, and 25.7 for the nation.

Gordon showed that a decade earlier (1950) mortality rates for the Japanese in Hawaii as a whole were decidedly lower than for the white population of the United States (*3*). Referring to the Japanese in the entire country, including those in Hawaii, he stated:

> It is worth noting that the generally favorable mortality experience for the Japanese in the United States is nothing new. Although there were naturally some differences in detail, mortality for this group was relatively low in 1940 and in 1930. Were this not the case, the small size of the Japanese population in the United States, and consequently the small number of deaths reported, might raise some doubts, on grounds of variability of small numbers, with respect to the reported death rates. As it is, there is little question that the death rates give a generally reliable indication of the force of mortality in the Japanese population.

Incidence of Acute Conditions

Acute conditions included in the survey were those which had their onset within the 2 weeks prior to the week of interview and for which the person afflicted had seen a physician or reduced the amount of his usual activities for at least 1 day. Minor conditions involving neither restricted activity nor medical attention were excluded.

As indicated in table 4, incidence rates per 100 population for all acute conditions reported were 185 for the Japanese, 292 for the other groups on Oahu, and 215 for the U.S. mainland (National Health Survey report B18). Thus the Japanese rate was 14 percent lower, and the rate for other Oahu groups 36 percent higher than the rate for the mainland.

For each of the conditions listed in table 4, the rate for Japanese was lower than for the other Oahu groups. In percentages, the least difference occurred for diseases of the ear and the greatest for skin diseases. In the latter category, the rate was 58 percent lower for the Japanese. At least to some extent, this especially large difference may be related to the fact that nearly one-half of the "other Oahu groups" are Caucasians, who are possibly more prone to

Table 3. Number of deaths per 1,000 population by age, Japanese and all other groups on the island of Oahu, 1959–61, and United States, 1960

Age	Japanese of Oahu	Other Oahu groups	United States [1]
All ages	4. 4	5. 5	9. 5
Under 1 year	20. 7	23. 6	26. 8
1–24	. 5	. 7	. 8
25–44	1. 1	2. 2	2. 2
45–64	6. 8	12. 1	11. 6
65 and over	39. 9	69. 2	60. 5

[1] Estimated in *Health, Education, and Welfare Indicators*, November 1962.

Table 4. Incidence of acute conditions per 100 population by condition group, Japanese and all other groups on the island of Oahu, September 1958–October 1959, and U.S. mainland, July 1958–June 1959

Condition group	Japanese of Oahu [1]	Other Oahu groups [1]	U.S. mainland [2]
Total conditions	185	292	215
Infectious and parasitic diseases	10	15	26
Diseases of the ear	7	8	5
Upper respiratory conditions	78	116	83
Other respiratory conditions	34	57	43
Digestive system conditions	9	19	12
Diseases of the skin	5	12	3
Current injuries	27	40	29
All other acute conditions	14	26	15

[1] Age-adjusted on U.S. population, July 1958–June 1959, as estimated in the National Health Survey program.
[2] From National Health Survey report B18.

Table 5. Prevalence of selected chronic conditions per 1,000 population, Japanese and all other groups on the island of Oahu, September 1958–October 1959, and U.S. mainland, July 1957–June 1959

Selected conditions	Japanese of Oahu [1]	Other Oahu groups [1]	U.S. mainland [2]
Heart conditions	12	19	30
High blood pressure	27	38	31
Diabetes	13	17	9
Peptic ulcer	5	9	14
Arthritis and rheumatism	14	41	64
Hernia	3	8	15
Asthma-hay fever	70	75	54
Chronic bronchitis	5	12	12
Chronic sinusitis	22	27	59
Visual impairments [3]	8	16	18
Hearing impairments	31	26	34
Paralysis of major extremities or trunk	6	5	6

[1] Age-adjusted on U.S. population, July 1957–June 1959, as estimated in the National Health Survey program.
[2] From National Health Survey report C5.
[3] Does not include impaired vision corrected by glasses.

skin diseases under a tropical sun than darker people (*4*). The rate for the other groups was four times as high as the mainland rate and about one and one-half times as high as the Japanese rate. Although the Japanese rate was lower than the rate for other groups on Oahu, it was considerably higher than the mainland rate.

Like the rates for skin diseases, rates for diseases of the ear were also higher on Oahu for both the Japanese and other groups. This may be related to the much higher prevalence of "asthma-hay fever" in Hawaii than in the United States as a whole. As will be shown later, this category was by far the most frequently reported chronic condition in the Oahu survey. Clinicians have observed that otological conditions frequently accompany such respiratory allergies as asthma and hay fever (*5*).

Infectious and parasitic diseases was the only category in which both Oahu segments had lower rates than the mainland. The Japanese rate was 62 percent lower, and the rate for other Oahu groups was 42 percent lower. Such relatively low rates on Oahu may well be due both to advanced public health practices of long standing and to the isolated location of Hawaii.

Although the rate for all respiratory conditions is lowest among the Japanese compared with the other two groups, these conditions constitute the leading cause of acute morbidity in all three groups. In each group, the number of respiratory illnesses reported was well over one-half of all acute conditions reported. The ratio of "other respiratory conditions" to upper respiratory conditions was also similar for each of the groups.

Data not shown in table 4 indicate that the incidence of disorders of pregnancy and the puerperium is greater among Japanese women than among women of the other local groups. On the other hand, deliveries considered as acute conditions were much more numerous among the other groups. This is in line with a recent estimate showing the birth rate for Japanese on Oahu as 20 per 1,000 population compared with 33 for the other groups. An especially high birth rate was found among military families, which are predominantly Caucasian.

Prevalence of Chronic Conditions

A reported morbidity condition was considered chronic if it was one of a predetermined group of chronic conditions and impairments or if the condition was first noticed more than 3 months prior to the week of interview. Since the information was obtained from a member of the family, it was not equivalent to findings from medical records or physical examinations. Obviously, diagnostic precision could not be expected; the data are therefore presented under broad groupings of chronic conditions (table 5).

Asthma-hay fever. Asthma and hay fever combined as a single category was by far the most frequently reported chronic condition in the Oahu survey. It constituted about 15 percent of all chronic conditions reported. Considering all ages together, the Japanese rate was about 7 percent lower than that for other Oahu groups; both were well above the mainland rate (table 5).

As table 6 indicates, this condition on Oahu, compared with the mainland was predominantly a disease of young people. For those under 25, the Oahu rate was more than twice that of the mainland; on the other hand, at

age 45 and over, the mainland rate was higher. It was the only frequently occurring chronic condition which showed a higher rate among young people under 25 of Japanese extraction than among those of the same ages in the other groups; however, at older ages, the Japanese rates were substantially lower.

Because of the strikingly high asthma-hay fever rate found by the Oahu survey (77.5 cases per 1,000 population), research personnel of the State health department and the University of Hawaii, together with a group of practicing physicians, are developing a cooperative research project which will attempt to ascertain the major causes of allergy in Hawaii. Etiological agents are as yet largely unknown; in fact, known conditions on the islands are such that a high prevalence of allergies would not be expected (*6*).

Other chronic conditions. The prevalence of heart conditions among the Japanese was 37 percent lower than among other Oahu groups and 60 percent lower than on the mainland (table 5). For high blood pressure not involving a heart condition, the Japanese rate was also lower than the rate for either of the two other groups, but the differences were less pronounced.

Similar results were obtained in a recent statewide mortality study in Hawaii that included persons 35 to 74 years of age (*7*). For example, the death rate among males from arteriosclerotic heart disease including coronary disease was 43 percent lower for the Japanese than for the State as a whole. The rate for hypertension not involving the heart was only 11 percent lower for the Japanese.

The diabetes rates for both the Japanese and other Oahu groups were well above the mainland rate. This may be due, at least in part, to diabetes detection campaigns carried out on Oahu during recent years. On the other hand, one of these campaigns conducted on a research basis during 1958 and 1959 among the gainfully employed on Oahu (*8*) found an overall rate of 21.5 cases per 1,000 population compared with only 4.5 cases in a diabetes survey of employed persons on the mainland reported by Pell and D'Alonzo (*9*). The Hawaii rate was also higher than rates in three other industrial surveys cited by these authors.

Although the diabetes rate for Japanese in the Oahu health survey was higher than the mainland rate, it was 24 percent lower than the rate for other Oahu groups. The Oahu diabetes study mentioned above showed a contrary result—the age-adjusted rate for other groups was 15 percent lower than for the Japanese. However, the health survey and the diabetes study are hardly comparable since the latter included only the working population.

The hernia rate was outstandingly low among the Japanese. The mainland rate was five times greater and the rate for other Oahu groups well over twice as great.

Visual impairments, not including impaired vision corrected by glasses, were much less prevalent among Japanese than among the other two groups. On the other hand, the prevalence of hearing impairments was somewhat higher among the Japanese than among other Oahu groups and about the same as on the mainland.

Table 6. Asthma-hay fever rates per 1,000 population by age, Japanese and all other groups on the island of Oahu, September 1958–October 1959, and U.S. mainland, July 1957–June 1958

Age	Japanese of Oahu	Other Oahu groups	U.S. mainland [1]
All ages	73	80	48
Under 25	107	90	44
25–44	54	79	52
45–64	35	51	53
65 and over	22	33	46

[1] From National Health Survey report B12. Data refer to a different time period than do data for the mainland shown in table 5.

Physician Visits

A "physician visit" was defined as consultation with a doctor of medicine or osteopathic physician in person or by telephone for examination, diagnosis, treatment, or advice. Service could be given by a doctor or by a nurse or other person acting under his supervision. Physician visits to hospital inpatients were not included nor were visits made for services on a mass basis for a specific type of procedure such as mass X-rays.

Table 7. Percent of acute conditions attended by a physician, by condition group, Japanese and all other groups on the island of Oahu, September 1958–October 1959, and U.S. mainland, July 1958–June 1959

Condition group	Japanese of Oahu	Other Oahu groups	U.S. mainland[1]
Total conditions	75	71	62
Infectious and parasitic diseases	84	76	66
Upper respiratory conditions	68	63	54
Other respiratory conditions	63	63	52
Digestive system conditions	77	59	66
Current injuries	93	88	81
All other acute conditions	87	88	80

[1] From National Health Survey report B18.

Volume of visits. The average number of physician visits per person per year was 4.0 for the Japanese compared with 6.5 for other Oahu groups and 4.7 for the mainland. This is out of line with comparisons of the rates of disability days. For example, bed-disability rates for the Japanese were 45 percent lower than rates for either the other Oahu groups or the United States as a whole, whereas physician visit rates for the Japanese were 39 percent lower than rates for others on Oahu and only 15 percent lower than rates for the mainland. Similarly, the bed-disability rate for groups on Oahu other than Japanese was the same as the rate for the country, yet the physician visit rate was substantially higher.

Apparently Oahu groups use physician services to a greater extent than does the country as a whole. This is probably the result of such factors as accessibility of hospitals and physicians' offices, health consciousness of Hawaii's people, and liberal provisions in the State for the medical care of the indigent and medically indigent. On the other hand, the ratio of physicians to population on Oahu is somewhat lower than in the country as a whole (*10*).

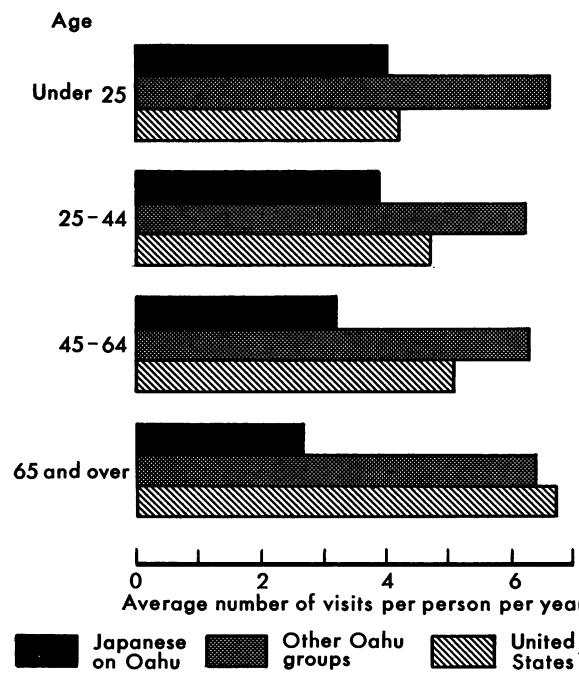
The percentage of acute conditions receiving medical attention tends to verify the conclusion that Oahu's people use physicians' services to a relatively large extent (table 7). Considering all acute conditions reported, 75 percent among the Japanese, 71 percent among other Oahu groups, and only 62 percent on the mainland were seen by a physician.

The largest discrepancy between percentages for the Japanese and other Oahu groups was in the category "digestive system conditions," in which 77 percent of the conditions among the Japanese and only 59 percent among the other groups were medically attended. This was also the only category where the percentage of conditions medically attended was lower among the other Oahu groups than on the mainland.

It is striking that the volume of physician visits among the Japanese decreased with age, whereas on the mainland the volume increased markedly with age (fig. 2). This trend is probably related to the fact that many of the older Japanese appear to constitute a physically select group. Also, having been exposed to less health education than younger people, older Japanese may see less merit in consulting a physician for minor illnesses.

Place of visit. About 82 percent of all physi-

Figure 2. Average number of physician visits per person per year by age, Japanese and all other groups on the island of Oahu, October 1958–September 1959, and U.S. mainland, July 1958–June 1959



[1] From National Health Survey report B19.

cian visits among Japanese were office visits, contrasted to only 55.1 percent for other Oahu groups and 65.0 percent for the mainland (table 8). The percentage of physician visits that took place in hospital outpatient clinics was about the same for the Japanese (8.9 percent) as for the mainland (10.0 percent), while the percentage for other Oahu groups was about three times as high (29.2 percent).

The percentage of home visits for both Oahu population categories was far lower than for the mainland (table 8). A probable reason for this difference is the greater accessibility of physicians' offices and hospitals on Oahu because of shorter distances and more easily available transportation. Also, during World War II when travel was exceedingly difficult, Hawaii physicians adopted the custom of making a minimum of home calls. Possibly this custom has persisted.

Much the same contrast exists for telephone consultations—percentages for both Oahu categories were much lower than for the mainland. According to national data, a large proportion of telephone consultations concern children (*11*).

About 11 percent of visits for other Oahu groups but only 4.4 percent for the Japanese fell in "other" categories such as an insurance office, health department clinic, or any other place where a physician consultation might occur. The lower percentage here for the Japanese may be related to the same unknown reason why they use hospital outpatient clinics much less than do other Oahu groups. It is notable that the percentage of 3.2 shown in table 8 for the mainland is even lower than that for the Japanese, although it includes visits where place was unknown. The Oahu data did not include any cases where place of physician visit was unknown.

Table 8. Percent distribution of physician visits by place of visit, Japanese and all other groups on the island of Oahu, September 1958–October 1959, and U.S. mainland, July 1957–June 1959

Place or means of visit	Japanese of Oahu	Other Oahu groups	U.S. mainland [1]
Total	100.0	100.0	100.0
Office	81.7	55.1	65.0
Home	2.0	1.4	10.3
Hospital clinic	8.9	29.2	10.0
Company unit	1.3	.4	1.1
Telephone	1.7	2.6	10.4
Other	4.4	11.3	[2] 3.2

[1] From National Health Survey report B19.
[2] Includes place of visit unknown.

Dental Visits

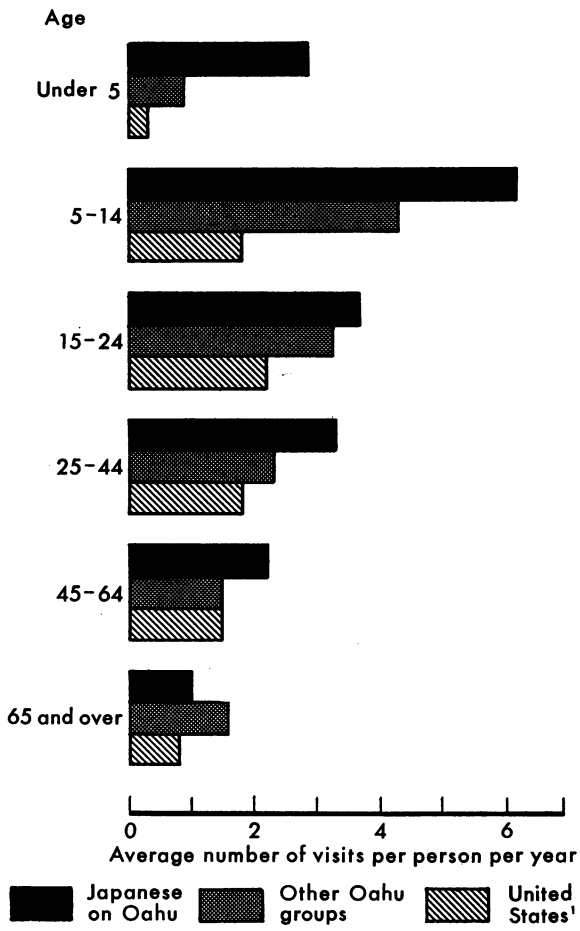
A "dental visit" was considered to be any visit to a dentist's office for treatment or advice. A visit may have involved services provided by the dentist or by a dental hygienist acting under a dentist's supervision. Services provided while a person was a patient in a hospital overnight or longer were not classified as dental visits.

Both the Japanese and other Oahu groups had higher rates of dental visits than the mainland population, with the Japanese rate higher than that for the other Oahu groups (fig. 3). These data appear to supplement and confirm a recent survey of dental caries among 96,000 Hawaii school children aged 5 to 16 years. Fieldwork for the survey was carried out largely in 1958, and the results were published in 1961 (*12*). It was concluded from results of this survey that the caries attack rate on the permanent teeth of school children in Hawaii was among the highest in the nation. For example, at age 16, 47.7 percent or nearly half of all erupted permanent teeth were affected by caries.

The survey also showed a high percentage of filled carious teeth in Hawaii compared with other areas. This, of course, indicated the extent to which the services of a dentist were used. A longstanding school program in which dental inspections and referrals to a dentist are made probably has much to do with the high rate at which dental services are used in the State.

With the foregoing statements in mind, the much higher rate of dental visits on Oahu compared with the mainland, as shown in the health survey, appears most likely to be the result of both a higher prevalence of carious teeth and the fact that Oahu residents are more likely to use the services of a dentist. Even without

Figure 3. Average annual number of dental visits per person by age, Japanese and all other groups on the island of Oahu, October 1958–September 1959, and U.S. mainland, July 1957–June 1959



[1] From National Health Survey report B15.

data from the dental survey cited, greater prevalence of caries might be expected on Oahu, where water fluoridation is not general. On the mainland, many communities use fluoridated water, which results in a reduction of carious teeth.

The dental survey also showed that the Japanese had a higher caries attack rate than other ethnic groups in Hawaii. This, of course, agrees with health survey data indicating a higher rate of dental visits for the Japanese. Why the Japanese suffer more tooth decay than others has not been investigated objectively. It offers a challenging avenue for research.

Dental visit rates for the Japanese diverged most widely from rates for other Oahu groups and the mainland at ages under 15 and diverged least at age 45 and over (fig. 3).

At ages 5 through 14 years, only 9 percent of the Japanese compared with 20 percent of other Oahu groups had not seen a dentist during the past year; only 26 percent of the other groups but 40 percent of the Japanese had seen a dentist four or more times during the year.

Summary

The Hawaii Health Survey was an extension of household interviews of the National Health Survey program to the island of Oahu for the 1 year, October 1958 through September 1959.

As judged by the average number of restricted-activity days and bed-disability days per person per year, the health of the Japanese on Oahu is superior to that of other groups living on the island and to that of the population of the country as a whole. Low age-specific death rates among the Japanese in Hawaii tend to verify this finding.

The incidence rates per 100 population for acute conditions reported are 185 for the Japanese, 292 for other Oahu groups, and 215 for the U.S. mainland. Upper respiratory conditions constitute the major acute morbidity problem for all groups, but the rate is lowest among the Japanese.

Asthma-hay fever is the most frequently reported chronic condition on Oahu with a rate more than 40 percent higher than for the mainland. Young Japanese under 25 seem to be especially susceptible to this condition. On the other hand, rates for heart conditions, peptic ulcer, arthritis and rheumatism, hernia, chronic bronchitis, and visual impairment are outstandingly low for the Japanese.

Oahu residents, including the Japanese, make greater use of physician services than the population of the country as a whole. The rate of physician visits among the Japanese decreases with age, whereas in the country at large the rate increases with age. The Japanese patronize hospital outpatient clinics to a much lesser extent than other Oahu groups. Well over 80 percent of all physician visits for the Japanese are in a doctor's office.

The average number of dental visits per per-

son per year for the Japanese, particularly among younger people, is higher than for other Oahu groups or the country as a whole. Other studies indicate that this higher rate is associated with a higher caries attack rate.

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Smallpox Vaccination for High-Risk Groups

Smallpox vaccination at least every 3 years, or preferably every year, for persons working in and around international seaports, airports, and land border points of entry to the United States and for persons meeting and treating the sick at these points would provide a high level of protection against smallpox to the persons most likely to have contact with an infected traveler, according to Dr. Luther L. Terry, Surgeon General of the Public Health Service.

In recommending "a voluntary, continuing program of smallpox vaccinations for these high-risk groups," he expressed the hope that local health departments and employee health services in port areas will cooperate with medical officers of quarantine stations in carrying it out. The high-risk groups include port workers; airline and shipping company employees; taxi, bus, and ambulance drivers; porters; restaurant, hotel, and laundry workers; policemen; and physicians, nurses, and hospital employees. A program of vaccination for these groups, Dr. Terry said, would go a long way toward preventing or containing an outbreak of smallpox should an infected traveler slip through our quarantine screen.

All persons entering the United States, including U.S. citizens, must present an officially validated International Certificate of Vaccination or Revaccination Against Smallpox showing that they have been vaccinated within the past 3 years.