

Health Personnel in Hawaii, 1820-1974

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One of the most striking aspects of Hawaiian medical history is the high rate of growth in the Islands' professional health personnel. It was not until 1820, forty-two years after initial contact, that Hawaii had its first Western trained resident physician. Seventy-seven years later, on the eve of annexation, licensed physicians numbered 76. And after another seventy-seven years, in 1974, the total had increased to 1,309. This growth far exceeded the rate of increase in population.

The total number of professional and technical health personnel in the Islands has increased even more dramatically. The 1960 U.S. Census reported 4,122 civilians in Hawaii employed as physicians, dentists, optometrists, registered nurses, therapists, health technologists or technicians, or in similar work. By 1970 the total had increased to 5,800. While total population was growing 21.7 percent over this ten-year period, the number of health professionals increased by 40.7 percent.

Statistics on health personnel prior to 1884 are extremely rare and must for the most part be inferred from scattered historical accounts. Dr. Thomas Holman, Hawaii's earliest resident Western trained physician, arrived with the first band of American missionaries on April 4, 1820, and served in the Islands until October 2, 1821. Until that time, Hawaiians had had to depend on the *kahuna lapa'au* (traditional native practitioners) and occasional visits by ships' surgeons. The number of resident physicians apparently increased to two by 1830 and to six by 1840.¹ By 1853, the year of the smallpox epidemic, perhaps 17 American or European physicians were practicing in the King-

dom.² The first professional dentists soon followed, beginning with Dr. John Mott-Smith in 1851³ and Dr. John M. Whitney in 1869.⁵

The introduction of licensing requirements initially had scant effect on the compilation of medical manpower statistics. Licensing was instituted for foreign physicians in 1859⁵ and for all physicians in 1865,⁶ but it was not until 1897 that the first published figures on licensed physicians and surgeons—76, including one Chinese and several Japanese—appeared.⁷ Licensing was required for dentists under legislation enacted in 1892,⁸ for pharmacists in 1903,⁹ and for nurses in 1917.¹⁰ Except for one early total on licensed dentists (27 in 1904⁴), however, statistics on the numbers of licensed health professionals were published infrequently if at all during the early decades of the twentieth century.

Census statistics on medical and health personnel were first compiled in 1884. The Hawaiian census of that year reported 29 physicians and surgeons, four dentists, nine nurses, two veterinary surgeons, and 23 druggists at work in the Kingdom. These data were further cross-tabulated by race; the physicians, for example, included no Hawaiians, no Chinese, and 29 "others."¹¹

Census coverage of health manpower expanded considerably during the twentieth century. The number of professional and technical health occupations for which separate totals were published was four in 1900 and 1910, five in 1920, nine in 1930, eight in 1940, twelve in 1950, and 16 in 1960 and 1970. This increase in statistical detail coincided with a rapid growth in the number of health personnel. Physicians, for example, rose from 109 in 1900 to 341 in 1940 and 961 in 1970; dentists, from 21 to 401 during the seven-decade period; and

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TABLE 1.—Physicians, Dentists, Nurses, Pharmacists, and Veterinarians Enumerated in Censuses of Hawaii: 1884 to 1970

CENSUS YEAR	MEDICAL PERSONNEL LIVING IN HAWAII ¹					PHYSICIANS PER 100,000 POPULATION ²	
	PHYSICIANS AND SURGEONS ³	DENTISTS	REGISTERED NURSES ⁴	PHARMA-CISTS	VETERI-NARIANS	HAWAII	UNITED STATES
1884	29	4	9	23	2	36	(⁵)
1900	109	21	14	(NA)	6	71	173
1910	128	22	165	(NA)	14	67	164
1920	160	41	251	(NA)	6	63	137
1930	255	132	707	(NA)	12	69	125
1940	341	196	1,080	76	20	86	126
1950	493	256	1,278	148	26	103	128
1960	717	378	2,091	156	29	124	131
1970	961	401	2,919	217	54	134	140

NA Not available.
¹Data for 1930 and earlier years refer to "gainful workers," either in civilian life or the armed forces, and may include persons not currently employed. Data for 1940 and later years refer to employed persons, excluding members of the armed forces.
²Based on total population before 1940 and civilian population for 1940 and later years.
³Listed as "physicians and surgeons" in 1960 and earlier years and as "physicians, medical and osteopathic" in 1970.
⁴Listed as "nurses" in 1884, "trained nurses" in 1900-1930, "trained nurses and student nurses" in 1940, "professional nurses" in 1950 and 1960, and "registered nurses" in 1970. Student nurses, included only in 1940, numbered 274 in 1950 and 129 in 1960.
⁵Not available. The U.S. rate was 171 in 1880 and 166 in 1890.
 Source: *Census of the Hawaiian Islands Taken December 27th, 1884 Under the Direction of the Board of Education*; U.S. Census Office,

12th Census . . . 1900, Vol. II, Population, Part II, table 93; U.S. Bureau of the Census, *13th Census . . . 1910, Vol. IV, Population, Occupation Statistics, table V, pp. 294-295*; U.S. Bureau of the Census, *14th Census . . . 1920, Population, Hawaii, Occupation Statistics, table 10, pp. 7-8*; U.S. Bureau of the Census, *15th Census . . . 1930, Occupation Statistics, Hawaii, table 4, p. 9*; U.S. Bureau of the Census, *16th Census . . . 1940, Population, Second Series, Characteristics of the Population, Hawaii, table 13, p. 16*; U.S. Bureau of the Census, *U.S. Census of Population: 1950, Bulletin P-C52, table 53*; U.S. Bureau of the Census, *U.S. Census of Population: 1960, Final Report PC(1)-13D, table 120*; U.S. Bureau of the Census, *U.S. Census of Population: 1970, Final Report PC(1)-D1, table 221, and Final Report PC(1)-D13, table 170*; U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1957 (1960), p. 34*. The 1940 data for physicians and dentists and 1960 data for physicians, nurses and pharmacists are revised totals published in later census reports.

TABLE 2.—Medical Personnel Enumerated in the Census, by Sex, for Hawaii: 1960 and 1970

OCCUPATION	1970		1960	
	MALE	FEMALE	MALE	FEMALE
Total	1,914	3,886	1,539	2,583
Physicians, dentists, and related practitioners	1,448	232	1,267	119
Chiropractors	15	4	21	—
Dentists	381	20	374	4
Optometrists	28	—	54	—
Pharmacists	160	57	125	31
Physicians, medical and osteopathic	810	151	633	84
Podiatrists	—	—	31	—
Veterinarians	54	—	29	—
Registered nurses, dietitians, and therapists	196	3,085	101	2,214
Dietitians	11	85	8	58
Registered nurses	100	2,819	54	2,037
Therapists	85	181	39	119
Health technologists and technicians	270	569	171	250
Clinical laboratory technologists and technicians	90	274	71	109
Dental hygienists	5	18	—	16
Health record technologists and technicians	—	46	6	35
Radiologic technologists and technicians	70	109	66	66
Therapy assistants	—	9	3	—
Health technologists and technicians, n.e.c.	105	113	25	24

n.e.c. Not elsewhere classified.
 Source: U.S. Bureau of the Census, *U.S. Census of Population: 1970, Final Report PC(1)-D13, table 170*.

professional nurses, from 14 to 2,919. Further information appears in Tables 1 and 2.

This growth in medical manpower far exceeded the increase in total population. The number of physicians per 100,000 inhabitants, for instance, increased from 71 in 1900 to 86 in 1940 and 134 in 1970. The Mainland ratio

stood at 173 in 1900, 126 in 1940, and 140 in 1970.

Intercensal and postcensal data on health manpower must be obtained from other sources. One such source is the Honolulu city directory, which since 1880 has contained listings of physicians, dentists and druggists, often

TABLE 3.—Licensed Physicians (Including Military and Inactive) Living in Hawaii: 1897 to 1974

DATE	NUMBER	DATE	NUMBER	DATE	NUMBER
1897: Nov.	76	1933: June 30	244	1968: Apr. 24	903
1919: June 30	133	1937: June 30	267	1969: May 1	930
1921: June 30	141	1963: Apr. 20	743	1970: May 1	989
1924: June 30	163	1964: May 16	766	1971: May 1	1,049
1926: June 30	175	1965: May	801	1972: May 1	1,070
1928: June 30	195	1966: June	845	1973: May 1	1,203
1930: June 30	206	1967: Apr. 19	875	1974: Aug. 8 ¹	1,309

¹Preliminary.

Source: *Pacific Commercial Advertiser*, Nov. 18, 1897, p. 7; *Report of the President of the Board of Health* (annual, 1910-1930); *Board of Health... Its Major Activities, 1933*; *Annual Report, Board of Health... 1973*; *Annual Report, Department of Health, Statistical Supplement* (annual, 1962-1973).

on an island-by-island basis.¹² Another source is the Health Department tabulation of licensed physicians, published annually since 1963 and at less frequent intervals back to 1919. These data, unlike those in the decennial census, include physicians in the armed services and those no longer active; recent tabulations, moreover, include breakdowns by sex, race, island of residence, and employment status.¹³ Trends since 1897 are traced in Table 3. Data on licensed physicians, dentists, nurses, and pharmacists have appeared annually since 1969 in *The State of Hawaii Data Book*.¹⁴ A national source with detailed data on health personnel by state is *Health Resources Statistics*, issued annually by the U.S. Department of Health,

Education, and Welfare.¹⁵ Some of these data are summarized in the *Statistical Abstract of the United States*.¹⁶

Statistics of this type are not only historically significant but are also essential for the proper planning of health manpower and facilities. Disaggregated by island and district, age and sex, and field of specialization, they permit new insight into health needs and resources. Cross-tabulated by data on professional earnings, they often prove useful for studies in medical economics. And from a historical point of view, they document the rapid progress of Hawaii from a primitive medical backwater to its present status as an area well served by a large and diversified community of health professionals.

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