

SECTION 2

VITAL STATISTICS AND HEALTH

This section presents data on births, deaths, marriages, divorces, morbidity, dental health, hospitals, and health personnel.

Vital indices generally reflect the high health standards of Hawaii. Expectation of life at birth was 70.46 years for males and 77.18 years for females in 1969-1971, about twice the 1884-1885 average of 36.5 years. The crude death rate in 1973 was only 5.4, half the 1930 level. Deaths under one year of age per 1,000 live births dropped from 82.3 in 1930 to 13.7 in 1973. Diseases of the heart have accounted for a third of all deaths in recent years; cancer, for one-fifth. The 1973 crude birth rate was 18.3, compared with 31.6 two decades earlier. Over 99 percent of all babies were born in hospitals, and a fourth were born to military couples. One out of ten births was illegitimate. There were 6,117 fetal deaths in 1973, including 4,534 elective abortions. Marriages numbered 9,776 in 1973, with about 15 percent accounted for by nonresidents. Divorces reached a 1973 total of 4,170. The State had 30 hospitals (with 4,304 beds) and 199 nursing and care homes (with 1,328 beds) when most recently surveyed. State licensing boards listed 2,347 physicians and surgeons, 740 dentists, 5,823 professional nurses, and 408 pharmacists in 1975. The most common communicable disease reported to authorities in 1973 was influenza, with 6,911 cases. Dental health was only fair: the average number of decayed, missing or filled teeth when last surveyed was 6.85 for intermediate school students and 10.61 for those in high school.

Major sources for data on vital statistics and health are the annual statistical reports of the Hawaii State Department of Health and various publications of the U.S. Public Health Service. Section 2 of the *Statistical Abstract of the United States: 1974* contains similar data for the nation as a whole.

Table 26.—BIRTHS AND DEATHS: 1958 TO 1974
(Place of occurrence basis)

Calendar year	Births	Deaths ¹	Rates per 1,000 resident population		Rates per 1,000 live births		
			Births	Deaths ¹	Illegitimate births	Fetal deaths ²	Infant deaths ³
1958 ⁴	16,710	3,185	27.6	5.3	48.6	12.7	23.4
1959	17,050	3,374	27.4	5.4	51.6	15.3	24.0
1960	17,193	3,593	26.8	5.6	51.2	15.2	23.2
1961	17,558	3,428	26.7	5.2	57.6	14.2	21.7
1962	17,932	3,575	26.2	5.2	60.3	13.0	20.6
1963	17,744	3,709	26.0	5.4	64.1	11.9	22.5
1964	17,284	3,696	24.7	5.3	66.6	12.9	19.8
1965	16,259	3,764	23.1	5.3	72.4	14.4	21.5
1966	14,943	3,839	21.0	5.4	83.9	11.5	18.9
1967	14,765	3,973	20.4	5.5	87.5	13.7	16.9
1968	14,595	4,250	19.9	5.8	94.8	14.3	19.0
1969	15,690	4,214	20.9	5.6	96.6	13.7	19.2
1970	16,467	4,197	21.3	5.4	95.8	20.6	19.1
1971	15,845	4,351	19.9	5.5	88.4	23.5	16.0
1972	15,413	4,483	18.9	5.5	93.0	22.8	17.5
1973	15,358	4,579	18.3	5.4	104.0	16.4	13.7
1974	15,525	4,600	18.3	5.4	(NA)	(NA)	16.2

NA Not available.

¹Includes armed forces.

²20 weeks gestation and over. Includes elective abortions.

³Under 1 year of age.

⁴For earlier years, see source; also, *The State of Hawaii Data Book 1974*, p. 41.

Source: Hawaii State Department of Health, "Vital Statistics and Population of Hawaii, 1900 to 1973," *R & S Report*, No. 5 (June 1974), *Statistical Report*, 1973, and records.

Table 27.—BIRTHS, DEATHS, AND BIRTH AND DEATH RATES, BY MILITARY STATUS: 1973 AND 1974
(Place of occurrence basis)

Military status	De facto population		Live births		Deaths		Birth rate ¹		Death rate ¹	
	1973	1974 ²	1973	1974 ²	1973	1974 ²	1973	1974 ²	1973	1974 ²
Total population	890,800	902,200	15,358	15,372	4,579	4,584	17.2	17.0	5.1	5.1
Armed forces	58,100	54,600	—	—	70	49	0	0	1.2	0.6
Civilians	832,700	847,600	15,358	15,372	4,509	4,535	18.4	18.1	5.4	5.4
Military dependents	70,300	68,300	3,739	3,698	169	164	53.2	54.1	2.4	2.4
Other civilians	762,400	779,300	11,619	11,674	4,340	4,371	15.2	15.0	5.7	5.6
Armed forces and dependents	128,400	122,900	3,739	3,698	239	213	29.1	30.1	1.9	1.7

¹Per 1,000 de facto population. For rates based on resident population, see the preceding table.

²Provisional.

Source: Population from the Hawaii State Department of Planning and Economic Development, *Statistical Report 106*. Births and deaths from Hawaii State Department of Health, *Statistical Report*, 1973, and records.

Table 28.—CHARACTERISTICS OF BIRTHS AND DEATHS: 1963 TO 1973
(Place of occurrence basis)

Subject	1963	1972	1973
LIVE BIRTHS			
Number	17,744	15,413	15,358
Percent on Oahu	85.7	81.8	81.7
Males per 100 females	105.4	106.1	104.5
Percent attended by M.D. in hospital	99.3	99.2	99.2
Percent with prenatal visit in first 3 months	45.5	64.7	66.4
Percent of mixed race ¹	39.8	42.0	42.8
Median age of mother (years)	25.5	25.1	25.0
Percent first births to mother	27.1	39.4	38.3
Median weight of single births (grams)	3,204	3,253	3,260
Percent of births plural	1.9	1.4	1.9
Percent of births premature (under 2,500 grams)	9.5	7.9	7.0
Percent with one or more congenital malformations	0.9	1.1	1.1
CIVILIAN DEATHS			
Number	3,643	4,430	4,509
Percent on Oahu	73.1	74.6	74.7
Males per 100 females	168.0	157.1	155.3
Median age (years)	63.7	66.6	67.2
Disposition (percent): Burial	56.1	51.7	51.4
Cremation	37.3	38.1	37.7
Removal	6.5	9.3	9.8
Other	0.2	0.9	1.1
INFANT AND FETAL DEATHS			
Infant deaths, under 1 year	399	270	210
Infant deaths per 1,000 live births:			
Under 1 day	12.2	9.1	7.4
Under 1 week	17.1	12.3	10.4
Under 1 month	18.3	13.8	11.1
Under 1 year	22.5	17.5	13.7
Fetal deaths, total	1,194	6,162	6,117
Per 1,000 deliveries	63	286	283
Fetal deaths, 20 or more weeks gestation	211	352	252
Elective abortions	9	4,547	4,534
Per 1,000 live births	0.5	295	295

¹Includes Part Hawaiian. Base excludes births with unknown parentage.

Source: Hawaii State Department of Health, *Statistical Report* (annual) and records.

Table 29.— DEATHS, BY CAUSE: 1933 TO 1973

Cause of death ¹	Number, 1973	Percent distribution			Rate per 100,000 population		
		1973	1963	1933	1973	1963	1933
All causes	4,320	100.0	100.0	100.0	519.1	527.8	950.1
Diseases of the heart	1,414	32.7	32.7	12.9	169.9	172.8	122.4
Malignant neoplasms	909	21.1	17.5	7.4	109.2	92.4	70.3
Cerebrovascular diseases	451	10.4	8.2	5.2	54.2	43.3	49.0
All accidents	264	6.1	6.2	6.1	31.7	33.0	57.8
Influenza and pneumonia	175	4.1	3.4	11.2	21.0	17.7	106.8
Certain causes in early infancy	132	3.1	7.9	6.1	15.9	41.6	58.3
Diabetes mellitus	114	2.6	2.5	1.6	13.7	13.3	15.1
Suicides	87	2.0	2.3	1.7	10.5	11.9	16.2
Cirrhosis of liver	73	1.7	1.4	0.7	8.8	7.6	7.0
Bronchitis, emphysema, and asthma	62	1.4	1.4	...	7.4	7.3	...
Congenital anomalies	59	1.4	2.2	1.7	7.1	11.6	16.4
Other diseases of arteries	45	1.0	1.3	...	5.4	7.0	...
Other external causes	40	0.9	...	...	4.8	...	...
Symptoms and ill-defined conditions	38	0.9	...	...	4.6	...	...
Homicide	36	0.8	0.3	0.7	4.3	1.5	6.3
All other causes	421	9.8	12.7	44.7	50.6	66.8	424.5

¹The leading causes of death in 1973, listed in order of deaths for that year.

Source: *Statistical Report, Department of Health, State of Hawaii, 1973*, p. 22.

**Table 30.—ACCIDENTS AND NATURAL DISASTERS CAUSING FIVE OR MORE DEATHS:
1779 TO 1974**

Category or year	All disasters		Worst disaster	
	Number	Deaths	Year or category	Deaths
All categories, 1779-1974	127	5,744	1941	2,500
Natural disasters	13	765	1790	400
Tsunami	5	287	1946	159
Flood, wind, or earth movement	7	78	1868	31
Volcano	1	400	1790	400
Fire or explosion	6	219	1944	163
Transportation ¹	101	2,088	1830	250
Marine	52	1,509	1830	250
Air	42	539	1955	66
Railroad or motor vehicle	7	40	1944, 1969	7
Violence ²	7	2,672	1941	2,500
Pearl Harbor attack	1	2,500	1941	2,500
Assault, murder, or riot	6	172	1790	100+
1779 to 1799	5	546	Volcano	400
1800 to 1849	9	376	Marine	250
1850 to 1899	20	488	Marine	210
1900 to 1949	55	3,769	Pearl Harbor	2,500
1950 to 1959	16	274	Air	66
1960 to 1969	10	183	Tsunami	61
1970	1	5	Auto	5
1971	3	35	Air	24
1972	2	28	Marine	20
1973	2	11	Air	6
1974	4	29	Air	11

¹Includes ships or aircraft that sank, crashed or vanished elsewhere, if Hawaii was their next (or last) port of call, or if Hawaii was the first land reached by survivors.

²Includes the Pearl Harbor attack but excludes the wars of the late 18th and early 19th centuries and the Battle of Midway.

Source: Robert C. Schmitt, "Catastrophic Mortality in Hawaii," *The Hawaiian Journal of History*, Vol. 3 (1969), pp. 66-86, as updated to December 31, 1974.

Table 31.—ABRIDGED LIFE TABLE, BY SEX: 1969-1971

Age x	Probability of dying in interval following age x q_x		Survivors at exact age x l_x		Average number of years lived after exact age x (expectation of life) e_x	
	Male	Female	Male	Female	Male	Female
0	0.022737	0.016250	100,000	100,000	70.456	77.181
1	0.003089	0.003080	97,726	98,375	71.093	77.454
5	0.001524	0.001672	97,424	98,072	67.308	73.689
10	0.001846	0.001092	97,276	97,908	62.407	68.808
15	0.006087	0.002893	97,096	97,801	57.517	63.880
20	0.006977	0.002730	96,505	97,518	52.853	59.058
25	0.007391	0.002590	95,832	97,252	48.206	54.213
30	0.008488	0.006011	95,124	97,000	43.547	49.346
35	0.012718	0.008650	94,317	96,417	38.897	44.628
40	0.018885	0.009817	93,117	95,583	34.364	39.995
45	0.027847	0.015597	91,358	94,645	29,974	35.365
50	0.046749	0.027898	88,814	93,168	25.755	30.883
55	0.062402	0.036897	84,662	90,569	21.889	26.693
60	0.095102	0.049049	79,379	87,227	18.170	22.616
65	0.151000	0.086142	71,830	82,949	14.801	18.644
70	0.212720	0.135163	60,984	75,804	11.971	15.149
75	0.314555	0.204799	48,011	65,558	9.511	12.106
80	0.382856	0.312503	32,909	52,132	7.731	9.556
85	1.000000	1.000000	20,310	35,840	6.009	7.740

Source: Robert W. Gardner and Eleanor C. Nordyke, *The Demographic Situation in Hawaii*, Papers of the East-West Population Institute, No. 31 (June 1974), pp. 74-75.

Table 32.—HOSPITAL FACILITIES AND USE: 1963 TO 1973

Subject	Hospitals ¹			Nursing and care homes		
	1963	1972	1973	1963	1972	1973
Number of institutions	34	31	30	66	152	199
Beds	5,280	4,252	4,304	704	1,080	1,328
Bassinets	400	323	321	—	—	—
Percent occupancy	73	74	70	78	91	(NA)
Average patient occupancy	3,850	3,148	3,033	546	978	(NA)
Patient days (1,000)	1,405	1,149	1,129	199	357	(NA)
Patients admitted	82,383	89,797	94,464	406	599	(NA)
Average stay (days)	17.1	12.8	12.0	491	596	(NA)

NA Not available.

¹Excludes State Hospital for 1972 and Tripler Army Medical Center for all years. In the year ended June 30, 1974, Tripler had 750 beds, 19,863 admissions (excluding newborns), an average census of 534, and a daily average bed occupancy of 450.

Source: *Statistical Report, Department of Health, State of Hawaii* (annual); Headquarters Tripler Army Medical Center, records.

Table 33.—BEDS IN HOSPITALS AND CARE HOMES, BY TYPE AND ISLAND: 1973

Type of facility and bed	State total	Hawaii	Maui	Lanai	Molokai	Oahu	Kauai
HOSPITALS¹							
All beds	4,304	475	317	10	71	3,117	314
General or acute	1,961	275	157	8	31	1,357	133
Matern.-gyn.	135	—	—	—	—	135	—
Pediatric	80	—	—	—	—	80	—
Mental	1,332	20	50	—	—	1,190	72
Tuberculosis	95	—	19	—	—	64	12
Orthopedic	40	—	—	—	—	40	—
Leprosy	40	—	—	—	40	—	—
Long-term	557	180	91	2	—	187	97
Rehabilitation	64	—	—	—	—	64	—
HOMES							
All types	1,328	28	21	—	7	1,202	70
Residential	668	16	21	—	7	574	70
Institutional	640	12	—	—	—	628	—

¹Excludes Tripler Army Medical Center (750 beds in 1974).

Source: Hawaii State Department of Health, *Statistical Report 1973*, pp. 93-94.

Table 34.—SELECTED LONG-TERM CONDITIONS: 1964 TO 1974

Subject	1964	1973	1974
Hawaii State Hospital:¹			
Total admissions	430	761	869
First admissions	294	367	402
Patients present:			
Annual average	998	229	251
June 30	931	235	297
Waimano Training School and Hospital:²			
First admissions	80	35	37
Inmates present:			
Annual average	836	717	694
June 30	841	705	696
Leprosy hospitals:³			
New admissions	12	11	3
Reactivated cases	7	6	—
Deaths	2	2	—
Active patients, Dec. 31	139	34	13
Hale Mohalu	68	19	5
Kalaupapa Settlement	71	15	8
Tuberculosis:³			
New cases reported	433	741	899
Active and probably active	280	303	364
Deaths	26	8	3
Active cases remaining on Tuberculosis Register, Dec. 31	388	307	365

¹The largest hospital for psychiatric patients in Hawaii. Data refer to years ended June 30.

²The only institution for the mentally deficient in Hawaii. Data refer to years ended June 30.

³Calendar year data.

Source: Hawaii State Department of Health, *Statistical Report* (annual), and records; Hawaii State Hospital, records; Waimano Training School and Hospital, records.

Table 35.—DENTAL HEALTH OF INTERMEDIATE AND HIGH SCHOOL STUDENTS ON OAHU: 1967-1968

Condition	Average		Age in years	Average number	
	Intermed. schools	High schools		Decayed teeth	Missing teeth
Decayed, missing, or filled teeth ...	6.85	10.61	12	1.60	0.12
			13	2.10	0.19
			14	2.70	0.34
Peridontal index ¹	0.44	0.28	15	1.51	0.27
			16	1.26	0.32
			17	1.23	0.37
Oral hygiene index score ²	0.77	0.63	18	1.17	0.53

¹Based on scores of zero for no gum disease, one for mild gum inflammation around a portion of the tooth, two for gum inflammation surrounding the tooth, and up to eight for severe gum disorders.

²Based on fraction of tooth surfaces covered by debris: zero for no debris, one for 1/2, two for 2/3, and three for more than 2/3.

Source: Hawaii State Department of Health, Dental Health Division, *Report on Dental Decay, Gum Disease, and Oral Hygiene Status for Students in Intermediate and High Schools*, memorandum dated June 6, 1969.

Table 36.—SPECIFIED COMMUNICABLE DISEASES: 1963 TO 1973

Disease	Cases			Deaths		
	1963	1972	1973	1963	1972	1973
All reportable diseases	14,480	13,592	18,812	160	36	20
Chickenpox	2,449	2,059	1,547	—	—	—
Gonorrhea	332	2,080	2,408	—	—	—
Hepatitis, infect. & serum	35	374	154	3	4	1
Influenza	1,316	1,402	6,911	4	3	4
Leprosy	22	45	44	1	1	—
Measles (Rubeola)	3,623	95	22	—	—	—
Measles, German (Rubella)	78	61	30	—	—	—
Mumps	2,598	316	283	—	—	—
Salmonellosis	320	560	540	1	—	—
Scarlet fever, other strep.	2,796	5,728	5,973	—	—	—
Syphilis	143	100	110	3	3	—
Tuberculosis	375	315	303	19	13	11
All others	393	457	487	129	12	4

Source: Hawaii State Department of Health, *Annual Report, Statistical Supplement* (annual).

**Table 37.—PHYSICIANS, DENTISTS, NURSES, AND PHARMACISTS LICENSED IN HAWAII:
1973-1975**

Place of residence	Physicians ¹		Dentists ²	Registered nurses ²	Pharmacists ²
	Total ³	Private			
Total licensed	2,158	1,534	662	4,021	321
Resident	1,415	1,114	497	3,405	250
Hawaii	82	72	33	230	14
Maui	66	53	18	173	15
Lanai	1	1	1	7	—
Molokai	3	3	1	21	2
Oahu	1,210	941	428	2,868	211
Kauai	53	44	16	106	8
Niihau	—	—	—	—	—
Nonresident	743	420	165	616	71

¹As of April 1, 1975. Excludes physicians with limited and temporary licenses.

²As of March 28, 1973. As of May 23, 1975, there were 740 licensed dentists, 5,823 licensed registered nurses, and 408 licensed pharmacists; the 1975 data are not available by place of residence.

³Includes private (1,534), military (128), retired (47), other practice (governmental, teaching, etc., 284), and not reported (165).

Source: Hawaii State Department of Health, records; Hawaii State Department of Regulatory Agencies, Professional and Vocational Licensing Division, records.

Table 38.—MARRIAGES AND DIVORCES: 1958 TO 1974
(Place of occurrence basis)

Calendar year	Marriages	Divorces and annulments ¹	Rate per 1,000 resident population		Percent of marriages	
			Marriages	Divorces ¹	Resident grooms	Inter-racial
1958 ²	4,727	1,228	7.8	2.0	(NA)	37.6
1959	4,958	1,378	8.0	2.2	(NA)	37.3
1960	5,237	1,270	8.2	2.0	96.3	37.3
1961	5,298	1,556	8.0	2.4	96.3	36.1
1962	5,484	1,471	8.0	2.2	96.5	37.7
1963	5,750	1,515	8.4	2.2	95.9	38.6
1964	5,790	1,690	8.3	2.4	94.7	38.3
1965	6,071	1,111	8.6	1.6	93.9	38.1
1966	5,792	897	8.2	1.3	92.5	37.7
1967	7,345	1,451	10.2	2.0	80.4	33.5
1968	9,021	1,865	12.3	2.5	70.1	33.8
1969	9,891	2,314	13.2	3.1	67.8	33.7
1970	10,599	2,589	13.7	3.3	69.3	33.7
1971	9,734	3,691	12.2	4.6	77.3	38.7
1972	9,750	3,891	11.9	4.8	81.3	38.6
1973	9,776	4,170	11.6	5.0	84.7	40.6
1974	9,700	4,111	11.5	4.9	(NA)	(NA)

NA Not available.

¹Final decrees only. An interlocutory decree of one year was established May 8, 1965, reduced to six months on July 3, 1969, and abolished July 1, 1971.

²For earlier years, see source; also, *The State of Hawaii Data Book 1974*, p. 50.

Source: Hawaii State Department of Health, "Vital Statistics and Population of Hawaii, 1900 to 1973," *R & S Report*, No. 5 (June 1974); *Annual Report, Statistical Supplement* for 1958-1973; and records.

**Table 39.—MARRIAGES, TOTAL AND INTERRACIAL, BY USUAL OCCUPATION OF GROOM:
1956-1957, 1967-1968, AND 1974**

Occupation of groom	All marriages			Interracial marriages			Percent interracial		
	1956-1957 ¹	1967-1968 ¹	1974	1956-1957 ¹	1967-1968 ¹	1974	1956-1957 ¹	1967-1968 ¹	1974
All grooms	10,055	16,368	9,647	3,499	5,404	3,871	34.8	33.0	40.1
No occupation	537	1,312	751	170	519	361	31.7	39.6	48.1
Civilian occupation	6,429	9,269	6,831	2,120	3,758	2,830	33.0	40.5	41.4
Professional, technical	722	1,740	1,309	159	501	445	22.0	28.8	34.0
Managers, officials, proprietors	562	974	1,056	165	300	364	29.4	30.8	34.5
Clerical	567	649	545	144	275	239	25.4	42.4	43.9
Sales	325	543	446	93	188	170	28.6	34.6	38.1
Craftsmen, foremen	1,478	1,834	1,286	440	752	570	29.8	41.0	44.3
Operatives	1,388	1,663	788	546	810	388	39.3	48.7	49.2
Private household, service	422	813	704	183	409	349	43.4	50.3	49.6
Farm laborers and foremen	283	165	51	123	72	23	43.5	43.6	45.1
Laborers, except farm	682	888	646	267	451	282	39.1	50.8	43.7
Armed forces	3,081	5,748	1,986	1,205	1,118	664	39.1	19.5	33.4
Not stated	8	39	79	4	9	16	(²)	(²)	20.3

¹Two-year period ended December 31.

²Base too small to compute meaningful rate.

Source: Robert C. Schmitt, "Recent Trends in Hawaiian Interracial Marriage Rates by Occupation," *Journal of Marriage and the Family*, Vol. 33, No. 2, May 1971, pp. 373-374; Hawaii State Department of Health, Research and Statistics Office, special tabulation.