

A NOTE ON THE RECORDED DEATHS FROM LEPROSY,
CONTINENTAL UNITED STATES, 1933-1948

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Leprosy is rarely a primary cause of death, but in the classification system used in the United States from 1933 to 1948, when entered on the death certificate as a cause or contributive cause, it took preference over tuberculosis and all other causes except the following: (1) anthrax, cholera, plague, tetanus; (2) "other diseases due to bacteria (except dysentery)," that is, those remaining when most of the acute bacterial infections are excluded; (3) "other diseases due to parasitic protozoa (except spirochetes)," that is, a group of protozoal diseases all of which are very rare in the United States; (4) yellow fever, rabies; (5) "other diseases ascribed to viruses," which include psittacosis and a few other rare causes; (6) typhus fever and typhus-like disease (due to rickettsia); (7) violent or accidental deaths (leprosy did not take preference over electric shock, sunstroke, ordinary accidents, etc., but did over hunger or thirst, and accidents caused by medical and surgical intervention); (8) ill-defined and unknown causes; and (9) a few other miscellaneous and rare causes. Thus, in the United States, practically all death certificates on which leprosy was mentioned were classified under "leprosy."¹

During the sixteen year period, 1933-1948, 451 deaths were so classified and recorded in the annual volumes of mortality statistics, U.S. Bureau of the Census (1, 2, 3). These are tabulated by age group, sex and color in Table 1.

Leprosy is indigenous in the United States chiefly in Louisiana, Texas and Florida. Most of the deaths during the stated period (86.7%) occurred among patients at the U. S. Public Health Service Hospital, Carville, Louisiana, known as

¹ This method of assignment of certificate to specific cause was changed in 1949.

TABLE 1.—Deaths from leprosy in the Continental United States, 1934-48, by age group, sex and color.

Age in years/ ^a	White/ ^b		Negro		Other Races		Total
	Male	Female	Male	Female	Male	Female	
10-19	2	1	0	0	0	0	3
20-29	23	9	6	1	2	0	41
30-39	45	22	2	2	8	1	80
40-49	74	20	13	7	2	2	118
50-59	43	12	11	3	6	0	75
60-69	45	20	2	3	0	0	70
70 & over	27	23	6	4	2	1	63
Total	259	107	40	20	20/ ^c	4	450/ ^c

^a None under 10 years of age.

^b Includes Mexicans.

^c One age, unknown, excluded.

the National Leprosarium. Unfortunately, except for the period 1942-1948, when 163 deaths occurred, Census Bureau tabulations have not been made to show deaths according to the state of which the decedent was a resident. Consequently, the statistics cannot be used to obtain valid indices of the respective risks for white and colored populations. It is of interest, however, that 81.2 per cent of the deaths occurred in white persons, which is a little higher than the proportion of white persons in the combined population of these states in 1940 (73.9%). This indicates that the risk of dying from leprosy—and probably of contracting it—is as great or greater for whites as for Negroes.

Excluding "other races," the deaths by sex show a ratio of 2.4 in males to 1 in females. Most of the patients at Carville suffer from lepromatous leprosy, and an excess among males is a characteristic of this form of the disease.

The trend of the death rate from leprosy during the period 1933-1948 may be approximated from data at hand. The number of patients at risk of death from this disease was apparently about the same throughout the period. Gray and Bancroft (4) give the average annual number of patients at the national leprosarium as follows: for 1929-35, 341; 1936-42,

368; and 1948-50, 383. The average age of patients is available from the same source: for 1929-35, it was 39.2 years; for 1936-42, 42.2 years; and for 1943-50, 43.2 years.

During the eight year period from 1933 to 1940, the average annual number of deaths attributed to leprosy in the United States was 31.0; for the eight year period from 1941 to 1948, it was 25.4. A somewhat higher proportion (91%) occurred at the national leprosarium during the earlier period than during the latter one (81%).

This apparent fall in the death rate is of especial interest because promin treatment was initiated at the national leprosarium in 1941, and it and other sulfones have been used generally in treatment since that time at the leprosarium and elsewhere in the United States. If the year 1941 is separated from the preceding and subsequent years, the numbers of deaths by age are as shown in Table 2.

TABLE 2.—Total deaths from leprosy in the Continental United States, by age groups from 1933-40, 1941, 1942-48.^a

Age in years	Periods			Total
	1933-40	1941	1942-48	
10-19	1	1	1	3
20-29	28	3	10	41
30-39	47	8	25	80
40-49	70	15	33	118
50-59	38	5	32	75
60-69	32	4	34	70
70 & over	31	4	28	63
Total	247	40	163	450

^a One of unknown age, male, "other races," omitted.

For the eight year period, 1933-1940, the average number of deaths occurring annually was 30.9; for the seven year period, 1942-1948, it was 23.3. Since the average age of the great majority of the patients (those at the institution) has advanced slightly in recent years, the conclusion can be reached that the death rate from leprosy fell substantially in the latter period, coincidental with the use of sulfones in treatment.

Further discussion of this point is given in the paper by Gray and Bancroft referred to.

It follows that what has occurred is an advance in the average age at death. From Table 2 it may be calculated that the average age at death for 1933-40 was 48.6 years; for 1941, 47.0 years; and for 1942-48, 53.3 years. The median age of death for 1933-40 was 46.9 years; for 1941, 45.0 years; and for 1942-48, 54.1 years.

CONCLUSION

It may be concluded from the data presented that the death rate from leprosy in the United States has fallen substantially in recent years, that this fall is attributable to a prolongation of life in leprosy patients, and that this prolongation is probably due to the newer methods of treatment, especially with the sulfones. This represents a noteworthy achievement of modern medicine.

RESÚMEN

Durante los años 1933-40, el promedio anual de muertes atribuidas a la lepra en los Estados Unidos de America, fué de 30.9, comparado con 23.3 durante los años 1942-48. Como la edad promedio de los pacientes en el leproscario nacional ha aumentado durante los últimos años, se puede concluir que el promedio de muertes por lepra ha disminuido precisamente desde la introducción de las sulfonas en el tratamiento de ésta enfermedad.

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