

DIGEST OF A SURVEY OF KNOWN CASES
OF TUBERCULOSIS IN SYRACUSE DURING 1927



DURING the calendar year of 1927 the Bureau of Tuberculosis of the Syracuse Department of Health planned and directed a survey the objective of which was to locate, as far as possible, every person in Syracuse who had ever been diagnosed tuberculous and to ascertain certain facts about such persons. This study, made by Miss Agnes Leisy, was financed by the Milbank Memorial Fund.

The survey was carried out along the general plan outlined by the National Tuberculosis Association, with modifications to meet local conditions. With the cooperation of public and private agencies and institutions and private physicians, records of the Department of Health, clinics, hospitals, schools, a preventorium and other likely sources were searched. Field work and correspondence were undertaken in a follow-up of thirty-four hundred cases, and the results of 1,764 cases were tabulated in this study. The remainder were excluded for various reasons, such as death prior to 1927, departure from Syracuse prior to 1927, duplicates, and cases could not be located.

In 1927 there were 1,727 residents and 37 non-residents on the tuberculosis register, including active, arrested, cured cases, and status unknown. On December 31 of that year, as a result of removal from the City, or death, there were 1,512 such residents and 23 non-residents. While the 23 non-residents remaining in Syracuse at the end of 1927 constitute a part of the tuberculosis problem of the City, for this study they were relatively unimportant, and were excluded from the tabulation and discussion.

Of all of the known cases among Syracuse residents, 1,349,

or approximately 78 per cent were of the respiratory system; 1,216 being of the respiratory system alone, and 133 complicated by other forms of tuberculosis. Given preference according to the International List in cases of combinations, the 378 cases of other forms follow tuberculosis of the respiratory system in order of frequency as shown in Table 1.

The classification of tuberculosis cases by status, as shown in Table 2, is based on the statements of physicians. In general, all cases which had not a recent report from a physician on their activity were classified as status unknown. Upon investigation it was found that the majority of persons whose status was unknown at the end of 1927 were well and working at that time and had not found it necessary to consult a doctor recently.

Table 1. Classification by type of the tuberculosis cases on the register in Syracuse, 1927.

(Includes active, arrested and cured cases.)

Type	No. of Cases
TOTAL	1,727
Respiratory system	1,349
Lymphatic system	187
Joints	54
Genito-urinary system	34
Spine	34
Intestines and peritoneum	29
Bones	17
Meninges or central nervous system	11
Skin	2
Organs other than the above	10

Table 2. Cases of tuberculosis on the register in Syracuse according to status as of December 31, 1927.

TYPE	STATUS OF CASE			
	ACTIVE	ARRESTED	CURED	STATUS UNKNOWN
TOTAL	395	380	381	356
Pulmonary	328	317	175	277
Other respiratory	25	19	7	13
Non-respiratory	42	44	199	66

STAGE	STATUS OF CASE			
	ACTIVE	ARRESTED	CURED	STATUS UNKNOWN
TOTAL	328	317	175	277
Minimal	74	154	123	102
Moderately Advanced	120	117	29	74
Far Advanced	127	25	3	13
Stage Unknown	7	21	20	88

Table 3. Cases of pulmonary tuberculosis on the register in Syracuse classified according to stage and status of the case as of December 31, 1927.

For cases of pulmonary tuberculosis, the last stage reported in the various status groups is shown in Table 3.

There is evidence of the comparative ease with which the minimal case becomes arrested or cured and the resistance which the moderately or far advanced case offers to becoming arrested. The active group had relatively the fewest cases in the minimal stage, and fewer moderately advanced than far advanced. In the arrested and cured groups the reverse is true.

The average age of the 1,727 persons included in this survey is thirty-four years. More significant than the average age is the fact that one-fourth of the cases are under 21 years of age, one-half under 31, and three-fourths under 41. A study of age and sex together reveals that the influence of sex does not operate equally at all ages. The differences in the age distribution of the cases for each sex are apparent as shown in Fig. I. The variations in the rates are minor up to the age of 25 when the rate for males rises considerably above that for females and continues consistently higher than the female rate during the rest of life.

Comparing the mortality rates from tuberculosis for each sex at different ages, as shown in Fig. 2, the most striking difference occurs in middle life. Beginning with the age group

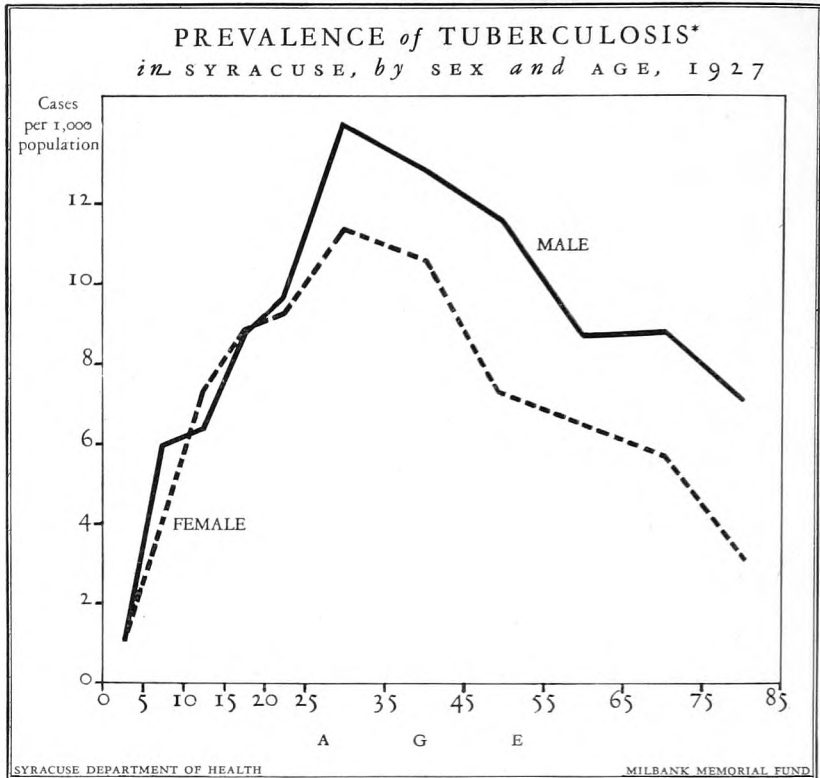


Fig. 1. Cases of tuberculosis, all forms, per 1,000 population, by sex and age in Syracuse, 1927.

*The chart is based on all persons known to have or to have had tuberculosis; i.e., active, arrested and cured cases on register in Syracuse in 1927.

25-34 years, the male rate increases and the female decreases, producing great disparity between the rates from 45 to 65 years of age.

More than half of the 1,727 persons included in the survey were married. Of the 395 persons known to have active tuberculosis, 195 were single; 169, married; 23, widowed; 5 separated; and for 3 marital condition was not specified. No relationship between marital condition and status of the disease is apparent.

A consideration of the question of residence indicates how

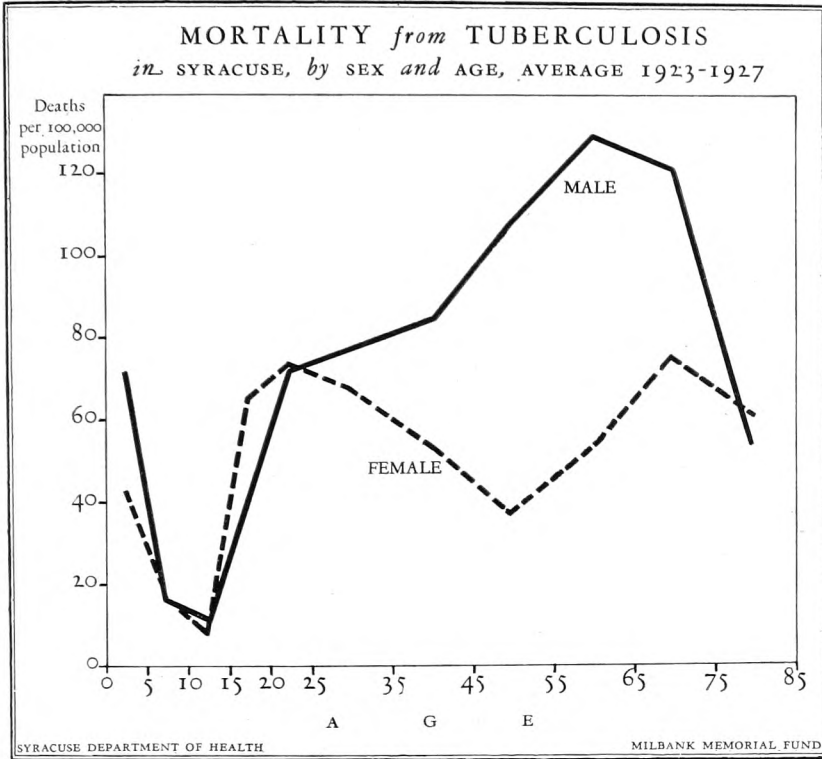


Fig. 2. Deaths from tuberculosis, all forms, per 100,000 population, by sex and age, in Syracuse, average for 1923-1927.

little the tuberculosis problem in Syracuse is influenced by conditions outside the City. As previously noted, only 37 of the 1,764 persons included in the survey had lived in Syracuse less than one year and thereby are considered non-residents. Excluding non-residents, 693 were born in Syracuse and lived there always; 47 were born in Syracuse and lived there 84 per cent of their total lives; 940 were born elsewhere and spent 46 per cent of their total lives there; 47 were born elsewhere and length of residence in Syracuse is unknown.

During the survey year 145 residents of the City having a history of tuberculosis died. The average length of time elapsing between the appearance of the first symptoms of

the tuberculous disease as reported and the death of the individual concerned was 4.53 years. Twenty-seven per cent of the cases has a duration under 1 year; 42 per cent, under 2 years; 56 per cent, under 3 years; and 65 per cent, under 4 years. While the actual duration of disease can be computed only for those in whom it has been terminated in death, the average length of life after onset for those remaining in Syracuse at the end of the year, as shown in Table 4, has some significance.

Syracuse is reported as the place in which the tuberculous disease had its beginning in 1,521 cases, the onset was elsewhere in 184 cases and not reported in 22 cases. The first diagnosis was made by a private physician in 1,041 cases; by a clinic physician in 371 cases; by a physician with a general hospital in 90 cases; a Veterans' Bureau physician in 43 cases; a sanatorium physician in 40 cases; by a physician with a state institution in 31 cases; by the County Hospital physician in 13 cases; by all other physicians in 31 cases; and for 67

Table 4. Average duration of life for all tuberculosis cases on the register in Syracuse, December 31, 1927.

Sex, Form and Status	Average Duration of Life
ALL CASES	7.2
Males	7.1
Females	7.0
Respiratory	7.0
Other forms	6.8
Active	5.6
Arrested	7.5
Cured	8.3
Status Unknown	9.1
Dead	4.5

cases the name or status of the physician making first diagnosis was not known.

In a study of case reporting in twelve medium-sized American cities, The National Tuberculosis Association found that in 1925, 16 per cent of the deaths were reported as cases a year or more prior to death. The comparable percentages in Syracuse for the past five years are: 1923, 26.7; 1924, 20.2; 1925, 33.1; 1926, 26.7; 1927, 36.1. These per-

centages are based on deaths of Syracusans at Onondaga and Ray Brook sanatoria, as well as on all tuberculosis deaths occurring in Syracuse. Of the 1,727 cases among residents, 1,212 or 70 per cent were reported to the Department of Health prior to the end of 1927. Of the 1,212 cases reported, 55 per cent were reported within a month after diagnosis; 75 per cent were reported in less than six months; and 81 per cent in less than a year after diagnosis.

Institutional treatment for tuberculous persons in Syracuse is furnished largely by the Onondaga Sanatorium, where 130 or 135 beds are available for Syracuse patients, and by the New York State Hospital for Incipient Tuberculosis, at Ray Brook, New York, and the general hospitals of Syracuse. Of the 1,727 residents included in this survey, 74 per cent had had sanatorium or hospital treatment for tuberculosis, 445 had had no such treatment, and for 40 information was lacking. Of the cases of tuberculosis of the respiratory system, 70 per cent reported sanatorium or hospital care. The length of time of treatment extended from one month to fifteen years. The average for tuberculosis of all forms was 12.0 months. At the end of 1927 there were 27 tuberculous persons in Syracuse awaiting admission to the Onondaga Sanatorium.

During 1927, nine weekly clinics were conducted by the Bureau of Tuberculosis of the Department of Health. The Onondaga Sanatorium conducts clinics every two weeks. The number of patients' visits to the Department of Health chest clinics for 1927 was 3,957. Clinic experience for tuberculosis was reported by 708 residents; 934 reported no clinic experience and for 85 information was unknown.

Of the 1,727 residents included in this study, 587 reported one or more relatives with a history of tuberculosis; 1,029 reported no known tuberculous relative; for 111 information

was lacking. Forty-one per cent of the cases of respiratory tuberculosis had other cases of tuberculosis among relatives, and 20 per cent of the non-respiratory cases.

One of the most effective measures of tuberculosis control is the examination and close observation of contacts. A total of 5,071 persons, including 1,801 under 16 years, were living in the households of the 1,727 residents included in the survey. A medical examination at some time was reported for 48 per cent of the child and 40 per cent of the adult contacts of tuberculous cases. Medical examinations at some time were reported for 50 per cent of the child and 43 per cent of the adult contacts of cases of respiratory tuberculosis. Unfortunately the information does not include the date of examination, nor does it refer to a definite period of time.

Of the 1,727 residents included in this survey, 145 died during the year. At the close of the year 663 were gainfully employed, 325 were housewives, 236 were in school, 309 were unemployed, 14 were under 5 years of age, and for 35 information was unknown. Of those gainfully employed 77 were active cases, 175 were arrested, and 186 cured. The status of the remainder was unknown.

Of the 145 deaths in 1927 among residents diagnosed tuberculous, 125 were charged to tuberculosis and 20 to some other cause. Of the deaths from tuberculosis 107 occurred in Syracuse or at the Onondaga Sanatorium and 18 elsewhere. The official number of deaths from tuberculosis in Syracuse for 1927 is 115. Based on an estimated population of 196,645, these 115 deaths give a death rate (corrected for residents at Onondaga Sanatorium) of 59 per 100,000. For the 125 tuberculous residents who died from the disease, the deaths were charged to the following forms: 107 to tuberculosis of the respiratory system; 11 to tuberculous meningitis; 3 to tuberculosis of the intestines or peritoneum; 4 to other forms.