

PUBLIC HEALTH STATISTICS

STATE OF

OKLAHOMA

1952



PART I

REPORTABLE DISEASES

PUBLIC HEALTH STATISTICS

STATE OF

OKLAHOMA

1952



PART I

REPORTABLE DISEASES

Oklahoma State Department of Health
Oklahoma City, Oklahoma
G. F. MATHEWS, M. D., Commissioner

TABLE OF CONTENTS

Discussion.....	1
Diphtheria.....	2
Intestinal Diseases.....	3
Malaria.....	4
Measles.....	5
Meningococcal Meningitis.....	5
Poliomyelitis.....	5
Respiratory Streptococcal Infections.....	8
Whooping Cough.....	8
Other Acute Communicable Diseases.....	10
Rheumatic Fever.....	10
Tuberculosis.....	12
Veneral Diseases.....	13
Malignant Neoplasms.....	15

Appendix

Table I. Reported Cases of Selected Communicable Diseases, Number and Rate (Number per 100,000 Estimated Population), Oklahoma, 1943-1952.....	19
Table II. Reported Cases of Communicable Diseases, Number and Rate (Number per 100,000 Estimated Population), by Race, Oklahoma, 1952.....	20
Table III. Reported Cases of Communicable Diseases, by Months, Oklahoma, 1952.....	20
Table IV. Reported Civilian Cases of Communicable Diseases, Number and Rate (Number per 100,000 Estimated Population), and Number by Race, by Urban and Rural Residence, Oklahoma, 1952.....	21
Table V. Reported Cases of Malignant Neoplasms, by Primary Site of Lesion, Race and Sex, Oklahoma, 1952.....	21
Table VI. Reported Cases of Selected Communicable Diseases by Sex and Race, Oklahoma, 1952.....	22
Table VII. Reported Cases of Selected Communicable Diseases by Age, Oklahoma, 1952.....	23
Table VIII. Reported Cases of Communicable Diseases by County of Residence, Oklahoma City, Tulsa City, and Military, 1952.....	24

PUBLIC HEALTH STATISTICS OF OKLAHOMA
REPORTABLE DISEASES

1952

This, the ninth edition of Part I, Public Health Statistics of Oklahoma, contains information reported to the health department concerning illness in the State's population as a result of diseases which are reportable. Traditionally, diseases which are communicable from one person to another have been required by law to be reported to the local health department so that prompt action might be taken to prevent the spread of infection to others. Special report cards are mailed by the State Department of Health each week to practicing physicians for their use in making such reports. Space is provided on these cards for listing the diagnosis, name of patient, address, age, sex, and race of patient. When mailed, the cards go first to the county health officer where information from them needed for local action is transcribed and finally to the State Department of Health where they provide data on disease occurrence for the entire State.

From time to time, as conditions change, diseases are added to the list of reportable diseases when it is believed that information collected from large numbers of such cases will further efforts to control the diseases. Such prompted the addition of cancer in August 1947. Also, as conditions change, diseases are dropped from the list whenever it is found that information from them is no longer useful or needed. Such was the case with meningitis and influenza which were dropped beginning with January 1, 1952, and are now reportable only as epidemics.

In addition to weekly report cards prepared by physicians, hospitals, clinics, and local health departments, case reports are made by the State Laboratory, by death certificates, and by other states through interstate reciprocal notifications of disease contracted in Oklahoma but diagnosed and treated elsewhere. Cases reported among the civilian population have been allocated to the county where the disease was contracted, if that information was known, or to the county of residence. Cases reported among military populations have been tabulated separately and have been included in State totals, but were not allocated to various counties since they are the responsibility of military officials and not of local health officers.

The following discussion presents, by disease topics, the more important aspects of the morbidity experience of the State during 1952. Following the discussion are detailed tables showing attack rates for each racial group within the State and numbers of cases reported according to age, sex, race, month of report, and county of residence. Although cases of major communicable diseases reported which omit personal particulars of the patient are "queried" for additional information, there are still many cases appearing in "unknown" classifications for age, sex, or race, which make it obvious that race specific rates are understated.

Population figures used in computing rates for this publication have been estimated by the Statistics Division. Numbers of deaths for 1952 are provisional pending final totals to be published in Part II of Public Health Statistics.

It is well known that cases of disease occur which are never reported to health departments. The extent of underreporting varies from one disease to another depending upon the severity of the disease and the benefit or service to be derived by the patient following report to health authorities. It follows that cases of poliomyelitis are more completely reported than cases of measles. Nevertheless, the study of reported cases of disease is worthwhile for year-to-year comparisons even though the data do not give the complete picture of disease incidence. The most readily available measure of underreporting comes from death certificates which list a reportable disease as a cause of death when the case was not reported through case-reporting channels. It is routine practice to check such death certificates with case report files and to add the previously unreported case on the basis of information contained on the death certificate. Table I shows number of cases of selected diseases reported by death certificate expressed as a percentage of total reported cases. That there has been some improvement in completeness of reporting, however, is brought out by a comparison in the same table with percentages prevailing in the years 1946-1947.

Table I
Cases of Diseases reported by Death Certificate Only
Oklahoma, 1946-1947 and 1952

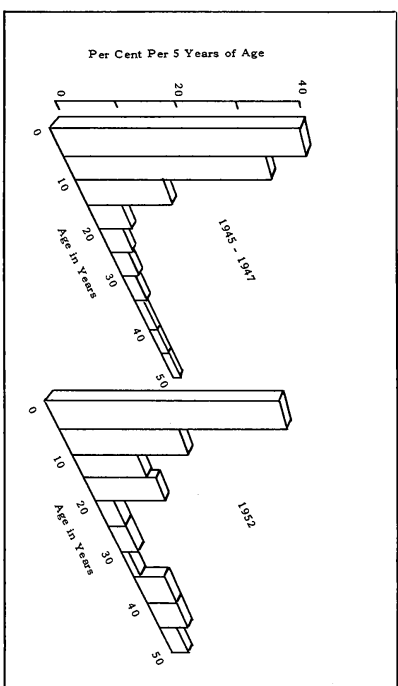
Disease	1946-1947		1952	
	Per Cent of Cases Reported by Death Certificate	Total Number Reported Cases	Cases Reported by Death Certificate	Per Cent Reported by Death Certificate
Diphtheria	4.9	74	1	1.4
Dysentery	15.3	189	16	8.5
Etiology, infectious	40.5	10	1	10.0
Meningitis, meningococcal	12.5	56	12	21.4
Poliomyelitis, acute	1.2	1,111	12	1.1
Rocky Mountain spotted fever	7.6	4	-	-
Septic sore throat	7.9	277	4	1.4
Tuberculosis, all forms	12.5	1,574	84	5.3
Whooping Cough	4.0	372	5	1.3

DIPHTHERIA

The 74 cases of diphtheria reported during 1952 represented the smallest number ever reported for the State, compared with 103 cases reported during the previous low year of 1951, and yielded an attack rate of 3.3 per 100,000 population which was also the lowest rate ever recorded. At the same time only two deaths were reported as being due to diphtheria, also setting a new low record for mortality from this disease. The decreasing annual diphtheria incidence rates are shown in the section dealing with whooping cough where a comparison is made between the two diseases.

Since diphtheria is completely preventable by proper immunization, any number of cases reported represents failure on the part of responsible persons to see that known measures were taken to prevent the occurrence of the disease. Chart 1 points out the percentage age distribution for reported cases in 1952 compared with the 1945-1947 average. Except for a reduction in the proportion of cases 5 to 9 years of age, there has been little change in the percentage age distribution although the annual number of cases was smaller in the more recent year. The greatest proportion of cases has continued to occur in children under five years of age.

Chart 1
Age Distribution of Reported Diphtheria Cases
Oklahoma, 1945-1947, and 1952

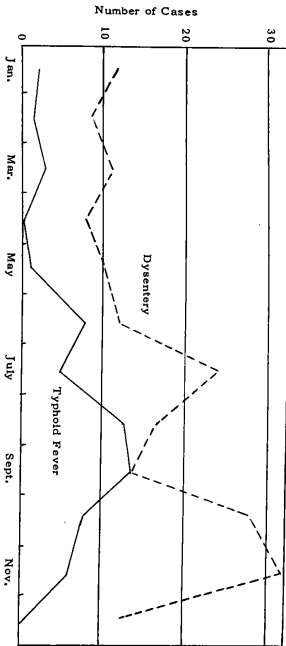


INTESTINAL DISEASES

Among the intestinal diseases, dysentery continued to be reported most frequently as the cause of illness. During 1952, 189 cases were reported giving an incidence rate of 8.5 cases per 100,000 population. One hundred twenty one of the cases, 64 per cent, were reported as bacillary dysentery, 23, 12.2 per cent, as amebic dysentery, and the remaining 45 were unspecified as to type. The highest incidence rate was among Indians, 143.2 per 100,000 Indian population, compared with 4.2 and 6.9 among white and Negro groups respectively. More than half of the 121 cases of bacillary dysentery, 64, were reported among Indians who comprised only 2.4 per cent of the total population. A concentration of these cases was present in the very young ages. Of these 64 cases, 13 or 20.3 per cent were under one year of age, 31 or 48.4 per cent were one to four years of age, while the remaining 20 cases were distributed fairly equally throughout the other age groups.

Sixty one cases of typhoid fever were reported giving a rate from this cause of 2.7 per 100,000 population. Although both the number and rate were higher than those of 1951, they were nevertheless lower than those for any other year except 1951 and 1946. The attack rate among Negroes was 8.9 per 100,000 population which was much higher than those among white and Indian groups which were 2.3 and 1.9 respectively.

Chart 2
Cases of Typhoid Fever and Dysentery, by Month of Report
Oklahoma, 1952



Toad poisoning was reported responsible for illness in 22 cases. For 21 of these cases the responsible organism was not specified while Salmonella was identified for the remaining case.

Other enteric diseases reported were 39 cases of paratyphoid fever, representing an increase in number over reported cases during the previous four years, and 3 cases of infectious diarrhea of the Heyburn.

MALARIA

Only 12 cases of malaria acquired in the United States were reported in Oklahoma for 1952, the smallest number ever recorded. This record was established despite the offering by the State Department of Health of \$5,000 to any physician reporting a case of malaria substantiated by laboratory findings. Three of the cases were among residents of McIntosh County, one each was reported in Dewey and Stephens counties while the remaining 7 were scattered, not more than one to a county, over the northeastern counties. No deaths were reported as being due to malaria.

As in previous years the highest attack rate was among Indians, 7.4 per 100,000 population, compared with 0.2 and 0.7 in white and Negro groups.

An additional 242 cases were reported as having been acquired outside the United States of which 232 were reported to be in military personnel.

MEASLES

After the measles epidemic year of 1951 when 8,000 cases were reported, 1952 was a relatively low incidence year with 1,719 cases reported. In non-epidemic years as well as in epidemic years the greatest numbers of cases occur to children under 10 years of age. This number in 1952 was 68.1 per cent of reported cases with age specified. That personal particulars were incompletely reported for measles cases was shown by the 440, 26 per cent, with age not given and the 362, 21 per cent, with race not specified.

The highest monthly incidence of reported cases occurred in May, April, and March in that order, the same three month period in which greatest numbers of cases were reported in 1951.

MENINGOCOCCAL MENINGITIS

The 56 cases of meningococcal meningitis reported in 1952 represented a decrease from the number reported for 1951, although still lower numbers have been reported in past years. Of these cases, 50 occurred among the white population, 5 among Negroes, and 1 among Indians. Nineteen deaths were reported as due to meningococcal infections giving a high case fatality rate, 33.9 per cent, compared with that which prevailed during the years 1950-1951 as shown in Table 2 where fatality rates for specific age groups also are shown. During 1952 case fatality rates at all ages were higher than would be expected from rates in previous years.

Table 2

Reported Cases and Deaths from Meningococcal Meningitis by Age Group, Oklahoma, 1952, and Case Fatality Rates, 1950-1951, and 1952

Age Group	1950-1951		1952	
	Case Fatality Rate	Reported Cases	Deaths	Case Fatality Rate
Total	22.7	56	19	33.9
Under 1 year	21.4	11	5	45.5
1-4 years	32.4	17	5	29.4
5-9 years	21.7	6	2	33.3
10-19 years	9.7	13	5	38.5
20-29 years	16.7	3	-	-
30 years and over	33.3	6	2	33.3
Unknown	-	-	-	-

POLIOMYELITIS

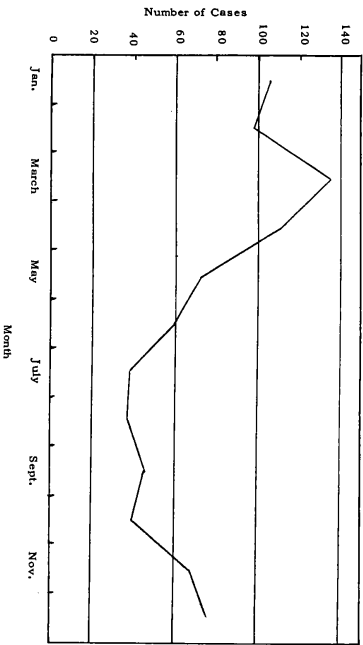
The year 1952 was an epidemic year for poliomyelitis in Oklahoma with 1,111 cases being reported. This number was the highest reported in recent years except for 1949 when 1,322 cases were reported. The 1952 attack rate was 49.7 per 100,000 population and among white, Negro, and Indian population groups, the attack rates were 52.0, 26.1, and 16.7, respectively. Forty-five deaths attributed to this disease in 1952 gave a mortality rate of 2.0 per 100,000 population and a case fatality rate of 4.1 per cent, both being lower than in 1949 when the mortality rate was 4.9 and the case fatality, 8.2 per cent.

RESPIRATORY STREPTOCOCCAL INFECTIONS

A total of 659 cases of respiratory streptococcal infections was reported for 1952 of which 382 were scarlet fever and 277 were septic sore throat. Corresponding incidence rates were 17.1 and 12.4, respectively, per 100,000 population. For scarlet fever both the number and rate were lower than for any other year except 1947. For septic sore throat, on the other hand, the rate was lower than those for 1949, 1950, or 1951, but higher than the rates which prevailed from 1943 through 1948.

The monthly incidence of these diseases continued to follow the pattern of respiratory illness in general with greatest numbers of cases being reported for the winter and early spring months. Chart 5 shows the average monthly incidence for the years 1950-1952.

Chart 5
Average Numbers of Reported Cases of Respiratory Streptococcal Infections, by Month, 1950-1952

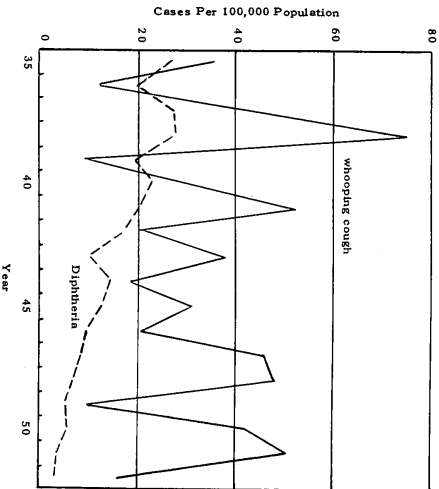


WHOOPIING COUGH

During 1952, 372 cases of whooping cough were reported giving an attack rate of 16.6 per 100,000 population. The rate among the Indian population was 40.9 compared with rates of 16.2 and 10.3 for white and Negro populations respectively.

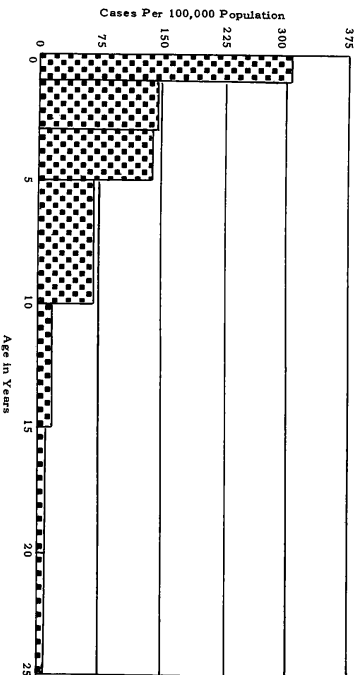
Less progress has been made in reducing the incidence of whooping cough than in any other disease for which a reliable immunizing inoculation is generally available. Chart 6 compares the annual attack rates of whooping cough and diphtheria since 1935. From this comparison it is evident that control programs for diphtheria have been much more successful than those for whooping cough.

Chart 6
Annual Attack Rates, Diphtheria and Whooping Cough Oklahoma, 1935-1952



The attack rate from whooping cough is highest in children under one year of age as shown in Chart 7. In this age group also the case fatality rate is highest, being 6.0 per cent in the period 1948-1952.

Chart 7
Whooping Cough Age-Specific Attack Rates Oklahoma, 1948-1952



OTHER ACUTE COMMUNICABLE DISEASES

For the second year in succession, no cases of smallpox were reported in the State and these two years 1951 and 1952 are the only two years during which no cases have been reported.

Two cases of rabies in man were reported both of which were fatal. One was a white male eleven years of age and the other was a white female forty three years of age. Reports of rabies in animals were received from the State Laboratory during the year. Positive rabies reports were made for 99 animals. Creek County was the location of the largest number, 16, reported for any county, followed by Muskogee County with 13 cases, Oklahoma County with 12 cases, and Tulsa County with 11 cases.

Tetanus was reported in nine cases of which seven were fatal. Four cases and no fatalities were reported as being due to Rocky Mountain spotted fever.

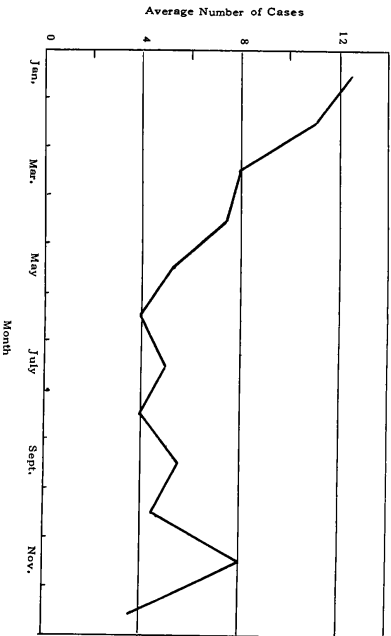
Other diseases reported were brucellosis (undulant fever), 68 cases; tularemia, 38 cases; German measles, 1,195 cases; mumps, 856 cases; and chickenpox, 1,215 cases.

RHEUMATIC FEVER

During 1952, 58 cases of rheumatic fever were reported which is the smallest number of cases reported in any year since the disease became reportable in 1949. These cases gave an attack rate of 2.6 cases per 100,000 population. Of these cases 52 were white, 1 Negro, and 5 Indian, giving rates of 2.6, 0.7, and 9.3, respectively, for these population groups.

Chart 8

Average Number of Reported Cases of Rheumatic Fever, by Month, Oklahoma, 1949-1952

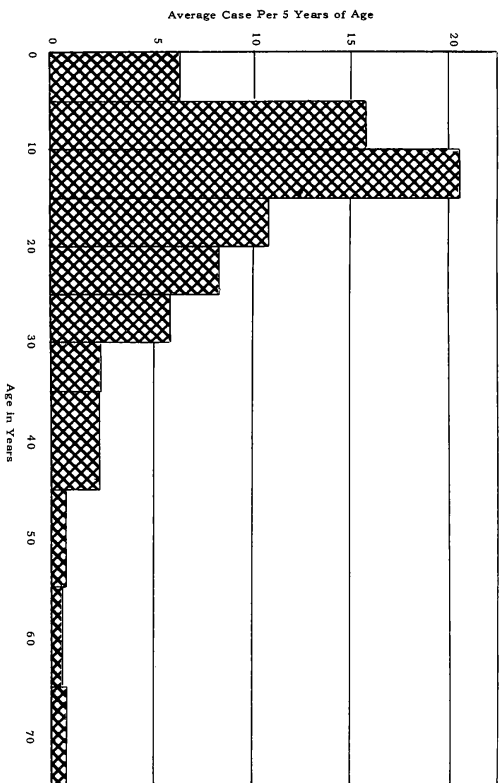


As would be expected, the incidence of rheumatic fever manifestations followed the same seasonal pattern as upper respiratory streptococcal infections to which they are occasional sequelae. The average numbers of reported cases by month during the years 1949-1952 are shown in Chart 8 where it may be seen that the greatest numbers of cases were reported during the months of January and February.

The age distribution of reported cases of rheumatic fever during the years 1949-1952 is shown in Chart 9. In this period of time the greatest number of cases for any five year age group has occurred among people 10 to 14 years of age. Seventy-two per cent of cases with age specified were 5 to 24 years of age.

Chart 9

Age Distribution of Reported Cases of Rheumatic Fever Oklahoma, 1949-1952 Average



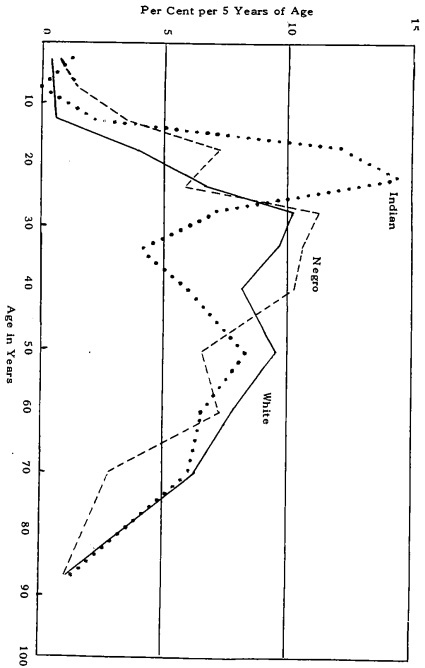
While 18 deaths from rheumatic fever occurred during the year, 197 deaths were reported as due to chronic rheumatic heart disease, a late effect of rheumatic fever.

TUBERCULOSIS

During the year 1,574 cases of tuberculosis were reported of which 1,524 were respiratory and 50 were other forms. Both the number and resulting attack rate of 70.4 per 100,000 population were the lowest since before 1943, at which time intensive case finding programs were started and case reports were made from death certificates when it was found that the occurrence of the disease in those individuals had not already been reported. The attack rate was highest among the Indian population where the 189 reported cases gave a rate of 351.5 per 100,000 population. Among Negroes, 133 cases gave a rate of 91.4 and 1,206 cases in the white population gave a rate of 59.2.

The age distribution of reported cases differed among the three population groups. As may be seen in Chart 10 the greatest proportion of Indian cases were 20 to 24 years of age while those for both the Negro and white populations were 25 to 29 years of age.

Chart 10
Age Distribution of Reported Cases of Respiratory Tuberculosis
by Race, Oklahoma, 1952



In Table 3, reported cases of tuberculosis are shown by stage and activity for respiratory tuberculosis, and by site for non-respiratory tuberculosis, together with the distribution of each type by race. Although the numbers of reported cases have been decreasing in recent years, the proportional distribution of the active respiratory cases among the three stages of advancement has remained fairly constant. In 1952, however, the most frequent specific diagnosis among the Indian cases was moderately advanced, active, while that among Negroes was far advanced, active, and that among the white population was arrested (including inactive).

Table 3
Reported Cases of Tuberculosis, by Type, Stage
and Activity, by Race, Oklahoma, 1952

Type, Stage and Activity	Total	Race			
		White	Negro	Indian	Unknown
Tuberculosis of respiratory system:	1,524	1,181	125	176	42
Minimal, active	147	122	6	16	3
Moderately advanced, active	268	205	14	42	7
Far advanced, active	236	170	27	36	3
Active, unspecified stage	230	157	34	20	19
Arrested (including inactive)	409	353	22	30	4
Activity questionable	138	102	16	15	5
Activity unspecified	96	72	6	17	1
Tuberculosis of other sites:	50	25	8	13	4
Meninges and central nervous system	9	4	1	4	-
Intestines, peritoneum, mesentery	5	3	1	1	-
Vertebral column	5	4	-	1	-
Other bones and joints	7	2	2	1	2
Lymphatic system	10	4	2	3	1
Genito-urinary system	6	3	1	1	1
Adrenal glands	-	-	-	-	-
Other organs	-	1	-	1	-
Disseminated (miliary)	6	4	1	1	-

VENEREAL DISEASES

Reported cases of syphilis in 1952 continued the downward trend from 7,903 cases reported in 1946 to 2,351 cases in this year. The greatest decrease was in primary and secondary syphilis with the 142 reported cases in 1952 being only 9 per cent of the number reported in 1946. The numbers of reported cases by stage for the years 1946 through 1952 are shown in Chart 11 on the following page.

The 2,351 cases of syphilis reported in 1952 gave a total attack rate of 105.2 per 100,000 population, while these rates for the individual racial groups were white, 61.0; Negro, 560.1; and Indian, 429.6.

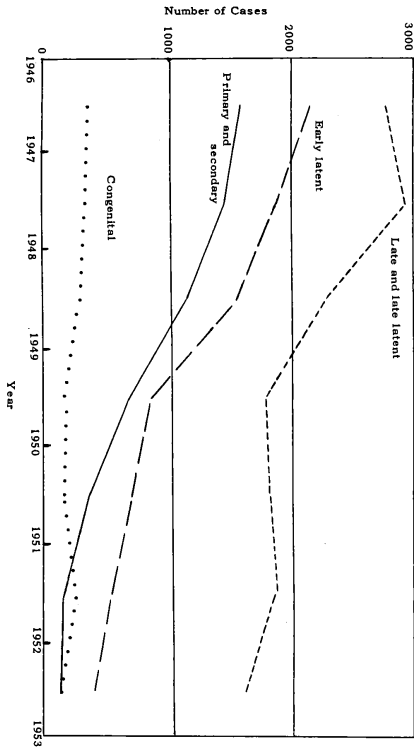
Table 4 shows the percentage distribution by age of reported cases of syphilis according to stage of the disease. As would be expected the greater proportions, approximately 70 per cent, of the primary, secondary, and early latent syphilis cases were reported in persons under 35 years of age, while only 21.2 per cent of the late and late latent syphilis cases were reported in persons under 35 years of age.

Table 4
Reported Cases of Syphilis by Certain Specified Stages,
by Age Group, Oklahoma, 1952

Age Group	Primary and Secondary		Early Latent		Late and Late Latent	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Total cases with age specified	137	100.0	377	99.9	1,460	100.0
Under 15 years	1	0.7	2	0.5	-	-
15-24 years	54	39.4	145	38.5	77	5.3
25-34 years	42	30.7	114	30.2	232	15.9
35-44 years	18	13.1	62	16.4	367	25.1
45 years and over	22	16.1	54	14.3	784	53.7

The 4,823 cases of gonorrhea reported for 1952 was the smallest number reported in any year since 1943. The attack rate among the total population was 215.7 per 100,000 population while rates for white, Negro, and Indian groups were 82.0, 1,943.6, and 556.1, respectively.

Chart 11
Reported Cases of Syphilis by Stage
Oklahoma, 1946-1952



Gonorrhea was reported one and one half times as often among males as among females, while slightly more than one half of the syphilis cases were reported among females. The other venereal diseases were reported five times as often among males as among females. The reported cases by sex are shown in Table 5.

Table 5
Reported Cases of Venereal Diseases
by Sex, Oklahoma, 1952

Disease and Stage	Total	Male	Female	Unknown
Total venereal diseases	7,174	4,056	3,117	1
Gonorrhea	4,823	2,944	1,878	1
Syphilis, all stages	2,351	1,112	1,239	-
Primary and secondary	142	80	62	-
Early latent	409	168	241	-
Late and late latent	1,616	789	827	-
Congenital	179	71	108	-
Not stated	5	4	1	-
Ophthalmia neonatorum	2	-	2	-
Other venereal diseases	61	51	10	-
Chancroid	45	36	9	-
Granuloma inguinale	4	4	-	-
Lymphogranuloma	12	11	1	-

MALIGNANT NEOPLASMS

During 1952, there were reported for the first time 1,558 cases of malignant neoplasm. These case reports were received through regular case report channels from physicians, clinics, and hospitals. While this number was greater than the 1,369 so reported during 1951, it was lower than the numbers reported during 1948, 1949, or 1950. It is well known that reporting of malignant neoplasms is far from complete and the numbers of reported cases, therefore, can not be taken as any indication of increasing or decreasing cancer incidence.

Table 6
Reported Cases of Cancer by Race
Number and Rate, Oklahoma, 1950-1952

	1950		1951		1952	
	Number	Rate	Number	Rate	Number	Rate
Total	1,649	73.8	1,369	61.3	1,558	69.7
White	1,536	75.5	1,251	61.5	1,443	70.8
Negro	102	70.1	105	72.2	106	72.9
Indian	11	20.5	13	24.2	9	16.7

Table 6 shows the numbers and rates for reported cases of malignant neoplasm by race for each of the years 1950, 1951, and 1952. The attack rates among the white population and among Negroes have been fairly close together while those among Indians have been much lower.

Age and sex are factors to which the incidence of cancer is related. Only 5.3 per cent of the 1,558 cases reported in 1952 were persons younger than 35 years of age. In the five year period that cancer has been reportable, the age specific incidence rates for persons 65 years of age and over have been almost 80 times larger than the rate for persons under 15 years of age. The incidence rate for those under 15 years had been one twenty-fifth the rate in the 45 to 54 years age group and one fifteenth that of the 55 to 64 years age group.

Chart 12
Attack Rates from Cancer by Sex and Age
Oklahoma, 1948-1952

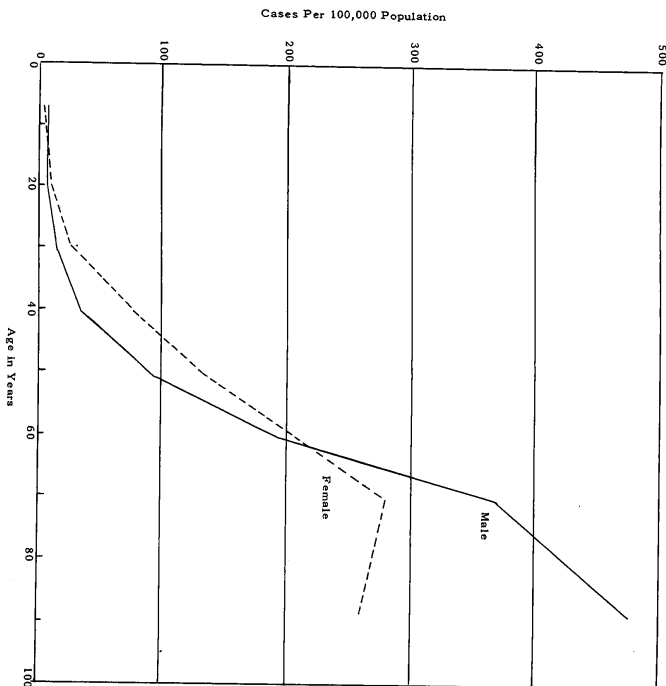


Chart 12 shows average age specific incidence rates for males and females for the years 1948-1952. For both sexes the attack rates were relatively low in the young age groups and increased with increasing age. In age groups 15 to 64 years of age the attack rate among females exceeded that among males and then was lower at ages 65 years and over. The highest attack rate among females came in the 65 to 74 years age group while that among males came in the 75 years and over group. Higher rates among females during younger and middle ages may be accounted for by the fact that 46.7 per cent of the malignancies reported for women were primary in the breast, uterus, or other female genital organs where malignancies tend to occur at earlier ages than malignancies of other sites.

The malignant neoplasm report form provides for the reporting of information as to whether or not metastasis had occurred and if so, as to the metastatic site. Out of the 1,558 reports, 1,083 or 69.5 per cent reported the presence or absence of metastasis. This represents an improvement in the quality of the case reports received because the highest proportion so reported previously was 49.6 per cent in 1950. Metastasis was reported in 305 cases, no metastasis in 778, and for the remaining 475 cases this information was not supplied. The proportion of cases for which metastasis status was reported varied according to primary site. Metastasis status was not reported for either of the two malignancies primary in the brain and other parts of the central nervous system, while on the other hand metastasis information was reported for 87.5 per cent of malignancies primary in the nose, nasal cavities, middle ear, and accessory sinuses, and for 85.9 per cent and 85 per cent respectively for those primary in the buccal cavity and pharynx and those primary in the skin.

Considering only those cases for which metastasis status was reported, the primary site group from which metastasis had occurred in the largest proportion of cases, 68.9 per cent, included the larynx, trachea, bronchus, lungs, and mediastinum. In contrast, the primary site groups from which metastasis had occurred in the smallest proportions of cases were nose, nasal cavities, middle ear, and accessory sinuses, 4.8 per cent and skin, 8.3 per cent. Metastasis had occurred in 48.9 per cent of malignancies primary in the breast by the time the case was reported. In 55.6 per cent of those primary in the digestive organs, in 56.5 per cent of those primary in the female genital organs (uterus excepted), and in 45.5 per cent of those primary in the male genital organs. At the same time, metastasis was reported to have occurred in only 16.7 per cent of cases primary in the uterus.

Information as to whether biopsy had been performed was available in 1,155, or 74.1 per cent of the cases. Of these, 887 stated that biopsy was performed. This 76.8 per cent was slightly lower than that of 1951 which was 77.9 per cent.

Cancer Cases Reported by Death Certificate Only

There were 2,588 deaths attributed to cancer for which no previous case report was found in the cumulative case report file started in August of 1947 when cancer was made a reportable disease. Because the dates of onset or diagnosis of these cases are not known, they were not included in the preceding discussion of cancer morbidity. Of the total number of deaths attributed to cancer in 1952 only 15 per cent had been reported as cases before death.

Table 7, which shows primary sites for cases reported through regular case report channels and for cases reported only by death certificate, points out some interesting differences. Thirty per cent of the cases reported while living had malignancies primary in the skin while only 2.5 per cent of cases reported after death had malignancies primary in the skin. On the other hand, 32.3 per cent of malignancies reported after death were primary in the digestive organs and peritoneum while only 12.6 per cent of the living reported cases were primary in the same site. Such differences might be expected since cancer of sites readily accessible to direct examination, the skin for example, may be observed shortly after the malignant growth begins while forms of internal cancer may remain undiagnosed until late in the course of the disease.

Table 7
Cases of Cancer Reported Through Regular Channels and by Death Certificate Only, Number and Per Cent, by Primary Site of Lesion Oklahoma, 1952

Primary Site	Cases Reported Through Regular Channels		Cases Reported by Death Certificate Only	
	Number	Per Cent	Number	Per Cent
Total	1,538	99.8	2,588	100.2
Oral cavity and pharynx	92	5.9	43	1.7
Digestive organs and peritoneum	196	12.6	837	32.3
Respiratory system	114	7.3	108	4.2
Breast	137	8.8	162	6.2
Uterus	199	12.8	211	8.2
Other female genital organs	34	2.2	68	2.6
Male genital organs	61	3.9	202	7.8
Urinary organs	44	2.8	115	4.4
Brain and other parts of central nervous system	468	30.0	64	2.5
None	2	0.1	59	2.3
Lymphosarcoma and reticulosarcoma	19	1.2	35	1.4
Hodgkin's disease	14	0.9	35	1.4
Leukemia	7	0.4	35	1.4
Other lymphatic and hemopoietic tissues	21	1.3	134	5.2
Other and unspecified sites	8	0.5	26	1.0
	142	9.1	454	17.5

Symbol Used in Tables
- Number or rate is zero
... Item not applicable
0.0 Rate is more than 0 but less than 0.05

TABLE 1. REPORTED CASES OF SELECTED CONTAGIOUS DISEASES, NUMBER AND RATE, (NUMBER PER 100,000 ESTIMATED POPULATION), OKLAHOMA, 1943-1952

Disease	1943		1944		1945		1946		1947		1948	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Anthrax in man	1	0.0	-	-	2	0.1	-	-	1	0.0	-	-
Brucellosis	30	1.3	50	2.2	37	1.6	36	1.6	67	3.0	68	3.0
Diphtheria	84	3.5	82	3.5	68	2.9	62	2.7	96	4.2	96	4.2
Dysentery	239	10.4	34	1.4	300	13.1	222	9.8	209	9.2	209	9.2
Scarlet fever	139	5.8	22	0.9	202	8.8	80	3.5	149	6.6	133	5.8
Shigellosis	18	0.7	6,596	287.7	4,694	203.8	11,050	486.4	9,335	412.7	107,7	47.7
Smallpox	4,694	203.8	1,461	61.4	1,461	61.4	308	13.6	595	23.7	72	3.1
Measles, acquired in U. S.	-	-	103.2	4.3	188.3	8.2	36.8	1.6	172	7.4	168	7.4
Measles, acquired outside U. S.	-	-	117	5.1	5.1	0.2	77	3.4	67	3.0	77	3.4
Hemiplegia, meningococcal	124	5.4	117	5.1	84	3.7	77	3.4	67	3.0	67	3.0
Scarlet fever	651	28.3	460	20.1	759	33.3	492	21.9	660	29.2	660	29.2
Paratyphoid fever	188*	7.3*	2	0.1	8	0.4	4	0.2	49	1.9	49	1.9
Poliovirus, acute	594	25.8	54	2.4	200	8.8	494	21.9	59	2.6	59	2.6
Rabies in man	1	0.0	3	0.1	25	1.1	30	1.3	36	1.6	36	1.6
Rocky Mountain spotted fever	16	0.7	15	0.7	1,003	43.7	49.9	2.2	1.3	0.0	1.3	0.0
Scarlet fever	1,030	44.7	1,003	43.7	1,003	43.7	546	24.0	353	15.6	353	15.6
Smallpox throat	222	9.6	184	8.2	194	8.5	180	7.9	198	8.8	198	8.8
Syphilis	19	0.8	7	0.3	13	0.6	16	0.7	4	0.2	4	0.2
Syphilis, all forms	9,511	413.0	8,142	355.1	5,978	261.9	7,903	347.8	7,117	317.2	7,117	317.2
Tuberculosis, all forms	1,751	76.0	2,867	125.1	2,246	98.4	2,654	117.3	2,435	107.7	2,435	107.7
Typhoid fever	33	1.4	10	0.4	25	1.1	86	3.8	130	5.7	130	5.7
Typhus fever	4	0.2	1	0.0	3	0.1	54	2.4	96	4.2	96	4.2
Whooping cough	885	38.4	426	18.6	713	31.2	479	21.1	479	21.1	479	21.1
Anthrax in man	86	3.8	144	6.4	95	4.3	72	3.2	68	3.0	68	3.0
Brucellosis	1,417	62.7	1,751	78.1	2,512	112.5	1,970	85.5	1,215	54.3	1,215	54.3
Diphtheria	165	7.3	132	5.9	131	5.8	103	4.6	74	3.3	74	3.3
Dysentery	163	7.2	273	12.2	152	6.8	154	6.8	189	8.5	189	8.5
Scarlet fever	1,659	72.5	3,984.2	176.1	5,309	237.7	5,573	249.4	4,823	215.7	4,823	215.7
Shigellosis	401	17.8	86	3.8	91	4.1	44	2.0	12	0.5	12	0.5
Measles, acquired in U. S.	1,459	64.8	7,538	336.2	648	29.0	2,066	92.0	1,719	76.9	1,719	76.9
Measles, acquired outside U. S.	8	0.3	8	0.3	2	0.1	2	0.1	2	0.1	2	0.1
Hemiplegia, meningococcal	65	2.9	56	2.5	56	2.5	72	3.2	56	2.5	56	2.5
Scarlet fever	887	39.4	2,764	123.3	2,977	131.5	1,659	74.2	85	3.8	85	3.8
Poliovirus, acute	5	0.2	5	0.2	14	0.6	8	0.4	39	1.7	39	1.7
Rabies in man	369	16.4	1,322	59.0	533	23.9	677	30.3	1,111	49.7	1,111	49.7
Rocky Mountain spotted fever	30	1.3	25	1.1	1	0.0	2	0.1	4	0.2	4	0.2
Scarlet fever	591	26.3	402	17.9	532	23.8	496	22.2	382	17.1	382	17.1
Smallpox	176	7.8	388	17.3	387	17.3	532	23.8	277	12.4	277	12.4
Shigellosis	1,329	60.0	1,659	74.2	1,659	74.2	1,329	60.0	1,329	60.0	1,329	60.0
Tuberculosis, all forms	2,946	128.3	2,462	107.2	2,030	90.9	1,762	78.8	1,574	70.3	1,574	70.3
Typhoid fever	84	3.7	74	3.3	61	2.7	52	2.3	38	1.7	38	1.7
Typhus fever	74	3.3	74	3.3	61	2.7	52	2.3	38	1.7	38	1.7
Whooping cough	1,044	48.1	226	10.2	933	41.8	1,115	49.9	372	16.6	372	16.6

TABLE VI. REPORTED CASES OF SELECTED COMMUNICABLE DISEASES BY SEX AND RACE
OKLAHOMA, 1952

Disease	Total			White			Negro			Indian			Unknown		
	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Unknown
Anthrax in man	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis	45	23	-	44	22	-	1	-	-	-	-	-	-	1	-
Chickenpox	550	537	128	514	503	51	23	20	-	10	12	-	3	2	77
Diphtheria	39	35	-	33	33	-	1	1	-	3	-	-	2	1	-
Dysentery	101	84	4	49	36	-	6	4	-	36	41	-	10	3	4
Encephalitis, infectious	5	5	-	5	5	-	-	-	-	-	-	-	-	-	-
German measles	345	304	546	331	286	33	7	9	-	7	8	-	-	-	513
Gonorrhea	2,944	1,878	1	1,044	625	-	1,791	1,037	-	95	204	-	14	12	1
Hookworm	15	5	-	13	5	-	2	-	-	-	-	-	-	-	-
Malaria, acquired in U. S.	6	6	-	3	2	-	-	1	-	1	3	-	2	-	-
Malaria, acquired outside U. S.	242	-	-	213	-	-	28	-	-	-	-	-	1	-	-
Measles	621	713	385	575	650	37	8	21	-	31	35	-	7	7	348
Meningitis, meningococcal	31	25	-	27	23	-	3	2	-	1	-	-	-	-	-
Mumps	457	320	79	436	304	6	10	9	-	6	4	-	5	3	73
Ophthalmia neonatorum	-	2	-	-	-	-	-	1	-	-	-	-	-	1	-
Paratyphoid fever	17	21	1	12	17	-	-	1	-	4	2	-	1	1	1
Poliomyelitis, acute	624	486	1	597	461	-	22	16	-	3	6	-	2	3	1
Rocky Mountain spotted fever	1	3	-	1	3	-	-	-	-	-	-	-	-	-	-
Scarlet fever	195	180	7	182	173	1	6	5	-	-	1	-	7	1	6
Septic sore throat	98	136	43	92	133	12	3	-	-	2	2	-	1	1	3
Smallpox	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Syphilis	1,112	1,239	-	609	633	-	397	418	-	82	149	-	24	39	-
Tetanus	5	4	-	4	2	-	1	1	-	-	1	-	-	-	-
Trachoma	21	30	-	-	-	-	-	-	-	20	30	-	-	-	-
Tuberculosis, respiratory	926	597	1	739	441	1	64	61	-	93	83	-	30	12	-
Tuberculosis, other forms	29	20	1	18	7	-	3	5	-	6	7	-	2	1	1
Tularemia	25	13	-	20	7	-	2	3	-	2	1	-	1	2	-
Typhoid fever	32	29	-	20	27	-	11	2	-	1	-	-	-	-	-
Typhus fever	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veneral diseases, other	51	10	-	14	1	-	36	7	-	1	2	-	-	-	-
Vincent's angina	19	26	2	13	15	-	2	1	-	1	1	-	3	9	2
Whooping cough	168	198	6	151	178	-	6	9	-	11	10	1	-	1	5

TABLE VII. REPORTED CASES OF SELECTED COMMUNICABLE DISEASES BY AGE
OKLAHOMA, 1952

Disease	All Ages	Age in Years														75 and Over	Unknown			
		Under 1 Year	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-44	45-54	55-64			65-74		
Anthrax in man	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis	68	-	-	-	-	-	-	-	1	4	6	10	11	11	17	4	-	-	4	-
Chickenpox	1,215	54	59	82	90	83	577	48	14	16	15	7	3	-	-	-	-	-	-	163
Diphtheria	74	4	6	5	7	4	13	7	8	2	2	1	7	4	-	-	-	-	4	-
Dysentery	189	31	26	19	8	6	16	8	3	7	8	7	9	6	3	6	4	4	22	-
Encephalitis, infectious	10	2	-	1	2	-	-	1	1	1	-	-	-	1	1	-	-	-	-	-
German measles	1,195	32	28	34	31	29	155	74	103	66	14	8	5	1	-	-	-	-	615	-
Gonorrhea	4,823	12	4	8	6	5	14	31	1,076	1,842	940	411	304	100	20	5	-	-	45	1
Hookworm	20	-	-	1	-	-	2	-	1	10	3	-	1	-	-	-	-	-	-	-
Malaria, acquired in U. S.	12	-	-	-	1	-	-	-	1	-	-	-	1	2	3	-	-	2	2	-
Malaria, acquired outside U. S.	242	-	-	-	-	-	-	-	13	146	35	16	21	3	-	-	-	-	1	-
Measles	1,719	56	88	105	82	93	447	176	111	48	28	20	18	5	-	1	1	1	440	-
Meningitis, meningococcal	56	11	10	2	3	2	6	10	3	2	1	-	2	-	1	2	1	1	103	-
Mumps	856	4	13	26	33	45	320	94	45	39	30	39	53	5	3	3	3	1	-	-
Ophthalmia neonatorum	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paratyphoid fever	39	2	3	1	1	-	-	1	2	4	3	4	3	5	1	4	2	3	11	-
Poliomyelitis, acute	1,111	32	54	73	69	95	280	199	129	64	49	25	27	3	1	-	-	-	-	-
Rocky Mountain spotted fever	4	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-
Scarlet fever	382	2	10	22	36	39	170	47	9	2	1	1	5	2	-	-	-	-	36	-
Septic sore throat	277	2	9	13	12	16	45	25	15	12	15	18	10	2	3	-	-	-	55	-
Smallpox	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Syphilis	2,351	5	1	1	-	1	10	28	140	243	208	197	451	443	296	98	28	201	-	-
Tetanus	9	1	-	1	-	-	-	4	-	2	-	-	-	1	-	-	-	-	-	-
Trachoma	51	-	-	-	-	-	11	20	6	3	1	1	3	-	1	3	1	1	-	-
Tuberculosis, respiratory	1,524	3	2	1	1	1	8	15	75	112	147	118	230	260	221	170	89	71	-	-
Tuberculosis, other forms	50	3	4	3	-	-	1	3	1	6	2	1	7	6	5	4	2	2	-	-
Tularemia	38	-	-	-	-	-	1	4	4	-	2	4	5	9	7	-	-	-	-	-
Typhoid fever	61	-	3	2	1	3	10	3	1	4	6	8	6	2	1	-	-	-	1	-
Typhus fever	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veneral diseases, other	61	-	-	-	-	-	-	-	9	21	20	5	2	2	2	-	-	-	-	-
Vincent's angina	47	-	1	-	-	-	2	3	6	10	2	-	3	3	-	-	-	1	16	-
Whooping cough	372	83	41	36	38	38	95	24	-	-	-	-	-	1	-	-	-	-	16	-

TABLE VIII. REPORTED CASES OF CONSPICUOUS DISEASES BY COUNTY OF RESIDENCE, OKLAHOMA CITY, MUSK CITY AND MILITARY, 1922.

Disease	State	Adair	Alfalfa	Atoka	Beaver	Beckham	Blaine	Boyan	Cache	Canadian
Arthritis in man	6	-	1	-	-	-	-	3	1	2
Brucellosis	46	-	-	-	6	4	1	3	2	1
Diphtheria	1,792	-	-	-	-	23	1	-	-	1
Dysentery, amebic	23	-	-	-	-	-	19	-	-	-
Dysentery, bacillary	121	-	-	-	-	-	2	-	-	-
Dysentery, unspecified	10	-	-	-	-	-	2	-	-	-
Epidemic typhus	1,195	-	-	-	-	-	2	-	-	-
German measles	4,823	-	-	-	-	21	35	8	14	1
Goiter	20	-	-	-	-	-	-	-	-	-
Hemorrhoids	29	-	-	-	-	-	-	-	-	-
Kalazar, acquired in U. S.	242	-	-	-	-	-	-	-	-	-
Kalazar, acquired outside U. S.	1,719	-	-	-	-	-	-	-	-	-
Measles	55	-	-	-	-	-	-	26	16	14
Mononucleosis, meningococcal	895	-	-	-	-	-	-	-	-	-
Ophthalmia neonatorum	39	-	-	-	-	-	-	-	-	-
Paratyphoid fever	1,111	-	-	-	-	-	-	-	-	-
Poliovulvitis, acute	99	-	-	-	-	-	-	-	-	-
Rabies in animals	4	-	-	-	-	-	-	-	-	-
Rocky Mountain spotted fever	38	-	-	-	-	-	-	-	-	-
Scarlet fever	277	-	-	-	-	-	-	-	-	-
Septic sore throat	17	-	-	-	-	-	-	-	-	-
Smallpox	2,351	-	-	-	-	-	-	-	-	-
Strep throat	9	-	-	-	-	-	-	-	-	-
Tetanus	51	-	-	-	-	-	-	-	-	-
Typhoid fever	1,528	-	-	-	-	-	-	-	-	-
Typhoid fever, paratyphoid	18	-	-	-	-	-	-	-	-	-
Typhoid fever, other	61	-	-	-	-	-	-	-	-	-
Typhus fever	47	-	-	-	-	-	-	-	-	-
Typhus fever, other	67	-	-	-	-	-	-	-	-	-
Varicella	42	-	-	-	-	-	-	-	-	-
Whooping cough	722	-	-	-	-	-	-	-	-	-

TABLE VIII. REPORTED CASES OF CONSPICUOUS DISEASES BY COUNTY OF RESIDENCE, OKLAHOMA CITY, MUSK CITY AND MILITARY, 1922.

Disease	Carter	Cherokee	Choctaw	Claremont	Clear-	Coal	Comanche	Cotton	Craig	Creek
Arthritis in man	1	-	-	5	1	-	-	-	4	2
Brucellosis	17	-	-	-	18	1	113	3	26	27
Diphtheria	1	-	-	-	8	1	1	-	-	1
Dysentery, amebic	-	-	-	-	1	-	11	-	-	2
Dysentery, bacillary	-	-	-	-	-	-	1	-	-	1
Dysentery, unspecified	-	-	-	-	1	-	62	-	-	1
Epidemic typhus	27	-	-	-	61	-	397	-	-	15
German measles	71	-	-	-	30	3	1	-	-	44
Goiter	-	-	-	-	2	-	-	-	-	-
Hemorrhoids	-	-	-	-	2	-	1	-	-	1
Kalazar, acquired in U. S.	-	-	-	-	67	-	139	-	-	59
Kalazar, acquired outside U. S.	98	-	-	3	2	-	2	-	-	7
Measles	-	-	-	-	5	-	84	-	-	19
Mononucleosis, meningococcal	12	-	-	-	-	-	-	-	-	-
Ophthalmia neonatorum	7	-	-	-	11	-	54	-	-	16
Paratyphoid fever	10	-	-	-	-	-	4	-	-	2
Poliovulvitis, acute	1	-	-	-	-	-	-	-	-	-
Rabies in animals	-	-	-	-	-	-	-	-	-	-
Rocky Mountain spotted fever	-	-	-	-	-	-	-	-	-	-
Scarlet fever	6	-	-	-	1	-	5	-	-	2
Septic sore throat	-	-	-	-	22	-	-	-	-	3
Smallpox	40	-	-	-	11	-	40	-	-	21
Strep throat	-	-	-	-	-	-	-	-	-	-
Tetanus	-	-	-	-	-	-	-	-	-	-
Typhoid fever	21	-	-	-	25	-	43	-	-	40
Typhoid fever, paratyphoid	-	-	-	-	-	-	2	-	-	-
Typhoid fever, other	-	-	-	-	-	-	1	-	-	-
Typhus fever	-	-	-	-	-	-	1	-	-	-
Typhus fever, other	-	-	-	-	-	-	1	-	-	-
Varicella	-	-	-	-	-	-	1	-	-	-
Whooping cough	8	-	-	4	17	2	18	-	-	2

Disease	Osage	Delaware	Dewey	Ellis	Garfield	Gavin	Grady	Grant	Greer	Harrison
Arthritis in man	-	-	1	1	-	-	-	-	2	1
Brucellosis	3	4	1	-	13	17	57	19	7	3
Diphtheria	1	-	1	-	-	-	-	-	-	-
Dysentery, amebic	16	-	1	-	-	-	4	-	-	1
Dysentery, bacillary	-	-	-	-	-	-	-	-	-	-
Dysentery, unspecified	10	-	-	-	-	-	-	-	-	-
Epidemic typhus	29	-	6	1	26	170	44	1	1	-
German measles	9	-	-	-	9	10	82	1	1	-
Goiter	-	-	-	-	-	-	-	-	-	-
Hemorrhoids	-	-	-	-	-	-	-	-	-	-
Kalazar, acquired in U. S.	14	-	1	-	45	69	5	-	-	-
Kalazar, acquired outside U. S.	14	-	3	12	9	3	24	-	-	-
Measles	-	-	-	-	-	-	-	-	-	-
Mononucleosis, meningococcal	2	-	1	-	9	14	1	-	-	-
Ophthalmia neonatorum	-	-	-	-	-	-	-	-	-	-
Paratyphoid fever	14	-	10	-	38	4	12	-	-	-
Poliovulvitis, acute	-	-	-	-	-	-	-	-	-	-
Rabies in animals	-	-	-	-	-	-	-	-	-	-
Rocky Mountain spotted fever	-	-	-	-	-	-	-	-	-	-
Scarlet fever	7	-	3	-	10	5	1	-	-	-
Septic sore throat	-	-	2	-	4	2	1	-	-	-
Smallpox	15	-	-	-	4	2	47	-	-	-
Strep throat	2	-	-	-	1	1	1	-	-	-
Tetanus	6	-	-	-	23	20	11	-	-	-
Typhoid fever	25	-	4	-	1	1	-	-	-	-
Typhoid fever, paratyphoid	-	-	-	-	-	-	-	-	-	-
Typhoid fever, other	-	-	-	-	-	-	-	-	-	-
Typhus fever	-	-	-	-	-	-	-	-	-	-
Typhus fever, other	-	-	-	-	-	-	-	-	-	-
Varicella	-	-	-	-	-	-	-	-	-	-
Whooping cough	10	-	-	-	7	5	-	-	-	1

Disease	Harper	McCull	Hughes	Jackson	Jaff-erson	Johnston	Kay	King-fisher	Kiowa	Latimer
Arthritis in man	-	-	-	-	-	-	-	-	-	-
Brucellosis	8	-	1	1	3	1	21	10	16	2
Diphtheria	-	-	2	1	-	-	-	-	-	-
Dysentery, amebic	-	-	-	-	-	-	-	-	-	-
Dysentery, bacillary	-	-	-	-	-	-	-	-	-	-
Dysentery, unspecified	-	-	-	-	-	-	-	-	-	-
Epidemic typhus	-	-	2	-	-	-	-	-	-	-
German measles	-	-	1	2	2	4	20	11	15	1
Goiter	-	-	-	-	-	-	-	-	-	-
Hemorrhoids	-	-	-	-	-	-	-	-	-	-
Kalazar, acquired in U. S.	-	-	-	-	-	-	-	-	-	-
Kalazar, acquired outside U. S.	7	-	-	16	3	1	17	11	38	-
Measles	-	-	-	12	-	-	-	-	-	-
Mononucleosis, meningococcal	-	-	-	11	-	-	-	-	-	-
Ophthalmia neonatorum	-	-	-	18	-	-	-	-	-	-
Paratyphoid fever	3	-	2	2	2	4	1	-	15	5
Poliovulvitis, acute	-	-	-	-	-	-	-	-	-	-
Rabies in animals	-	-	-	-	-	-	-	-	-	-
Rocky Mountain spotted fever	-	-	-	-	-	-	-	-	-	-
Scarlet fever	-	-	-	-	-	-	-	-	-	-
Septic sore throat	-	-	-	-	-	-	-	-	-	-
Smallpox	-	-	-	-	-	-	-	-	-	-
Strep throat	-	-	-	-	-	-	-	-	-	-
Tetanus	-	-	-	-	-	-	-	-	-	-
Typhoid fever	3	-	34	9	6	5	47	-	6	7
Typhoid fever, paratyphoid	-	-	-	-	-	-	-	-	-	-
Typhoid fever, other	-	-	-	-	-	-	-	-	-	-
Typhus fever	-	-	-	-	-	-	-	-	-	-
Typhus fever, other	-	-	-	-	-	-	-	-	-	-
Varicella	-	-	-	-	-	-	-	-	-	-
Whooping cough	-	-	-	-	-	-	-	-	-	-

