PUBLIC HEALTH STATISTICS

STATE OF

OKLAHOMA 1948



PART I REPORTABLE DISEASES

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REPORTABLE DISEASES

Oklahoma State Health Department Oklahoma City, Oklahoma

G. F. MATHEWS, M. D., Commissioner

The first tool of the epidemiologist is the accumulated data relating to "the occurrence, the distribution and types of diseases of mankind in distinct epochs of time and at various points on the earth's surface." The collection of the essential basic information, about such factors as age, sex, race, geographic location, etc. as related to groups of cases, came only through the painstaking efforts of doctors in keeping complete and accurate records. During the past century, the reporting of cases for many diseases was so inaccurate and incomplete that sound conclusions were not always possible. In more recent years, however, physicians have begun to realize the importance of the reporting of cases, and the collection of data has been of more dependable value in the study of disease.

The earliest epidemiologists were able to learn many facts that contributed to the control of certain diseases even before the causative agents of the diseases were known. The information that physicians, osteopaths, chiropractors, hospitals, and clinics furnish on the weekly reportable disease cards makes a definite contribution to the accumulated knowledge about diseases - knowledge which may aid materially in finding the solution to some of our health problems of today.

G. F. Mathews, M. D., Commissioner of Health

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PUBLIC HEALTH STATISTICS OF OKLAHOMA

REPORTABLE DISEASES

This is the fifth edition of Part I of <u>Public Health Statistics</u>. This edition, Reportable Diseases, includes statistical information concerning cases of diseases that were reported to the State Department of Health on cards received weekly from various sources throughout the State. In order that information on prevailing conditions may be available for those interested, weekly and monthly tabulations are made on these reported cases as they occur.

accurate as possible. The reports received are checked carefully to avoid duplication, and case reports received which lack information believed important to epidemiological study are queried for the missing data. The reported cases are allocated, as far as the available information allows, to the places where the diseases were contracted. The military cases received are tabulated separately; these cases are included in the State totals but are not allocated to the various counties, as they are the responsibility of the military officials and not of the local county health authorities. fit, all reports are edited routinely that they may be as complete and In an effort to make this information of the greatest possible bene-

to seasonal variation of the diseases. The study of disease incidence over a period of time is enlightening, and figures for a ten-year period are given in Table I on page 20. In analyzing this table, it is important to consider the possibility that improved methods of reporting which have been instituted, may have caused certain diseases to increase out of proportion with the actual change. In Tables IV and V shown on pages 22 and 23, the information is broken down by age, race and sex which is valuable in determining in which population groups certain diseases are occurring, just as the county tables, pages 24 to 27, give a clear picture of the Table III, page 21, shows cases by month of report for information as to seasonal variation of the diseases. The study of disease incidence geographical location of cases.

The death rates and case fatality rates that appear are computed from provisional resident death figures pending the final figures that will be published in Part II of <u>Public Health Statistics</u>.

and Indian racial groups for each disease. The population estimates used were computed in a manner similar to that used for the 1947 estimates. The net increase over the 1947 population estimate for each county was determined by the excess of resident live births over resident deaths. Rates per 100,000 estimated population are shown for the White, Negro,

school census. The popul added for the State total. for migration were made on the basis of the percentage change in the annual school census. The population estimates for the 77 counties were then This gave the change in population disregarding migration. The adjustments

trol and prevention. It must be remembered that although this information is of value in determining the trends of certain diseases, it does not reveal the complete picture of disease incidence as it exists throughout the State. Allowances must be made for the undeterminable number of cases that are not reported. Deaths, listing reportable diseases as a cause of death on the certificate, are included as cases if they were not reported from other sources. This helps to compensate for the recognized under-reporting. Table 1 shows the reported cases of certain diseases and the The methods used in preparing the statistics have been in view of discovering the extent and nature of the morbidity problems that exist in Oklahoma. Every effort has been made to encourage early reporting of diseases as they become known so that steps may be taken toward their congives an indication of the extent of the under-reporting of cases. number and per cent of each reported by death certificates. This table

Cases of Selected Diseases Reported by Death Certificates Only

Diarrhea of the newborn, infectious Diphtheria Dysentary Encephalitis, infectious Meningitis, meningococcal Pellagra Pheumonia, all forms Scarlet fever and septic sore throat Tetanus Typhoid and paratyphoid fevers Whooping cough	Disease
165 163 8 65 53 1648 767 9 2348 79	Total Number Reported Cases
75 75 76 77 76 76 76 76 76 76 76 76 76 76 76	Cases Reported by Death Certificates
55.1 55.1 55.1 55.1 55.1 55.1 55.1 55.1	Per Cent Reported by Death Certificates

Diphtheria

buted to diphtheria, number and rate, also showed a noticeable decrease through the years for which the figures are available. In 1928 there were 324 deaths and a death rate of 13.9; in 1948 there were 15 deaths giving The downward trend in reported cases of diphtheria continued in 1948, with 165 cases reported giving a rate of 7.1 per 100,000 estimated popua death rate of only 0.6. This was the lowest number and rate on record. The deaths attri-

The greatest number of cases of diphtheria occurred in small children, and the case fatality rates were higher in the younger age groups. Approximately 47 per cent or 78 cases in 1948 were under five years of age and another 26 per cent, from five to nine years of age, in the 4 years,1945—1948, about 41 per cent of the cases were under five years of age. Table 2 shows the reported cases and deaths by age groups with the case fatality rate for each group.

Reported Cases and Deaths from Diphtheria by Age Groups

Under 1 year 1-4 years 5-9 years 10 years and over Unknown	To tal	Age Group
- 43 - 43 - 44	165	Reported Cases
N & 4 H I	15	Deaths
11.9 9.9 1.3 1.3	9,1	Case Fatality Rate

Intestinal Diseases

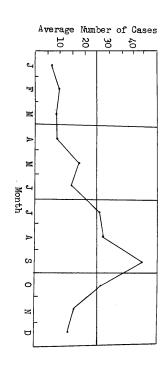
deaths were reported to have occurred from typhoid and paratyphoid fevers during the year which gave the lowest death rate (0.2 per 100,000 estimated population) and case fatality rate (6.3 deaths per 100 cases) on record. tion of 1946 when only 58 cases of these diseases were reported. There were 74 cases of typhoid fever and 5 cases of paratyphoid fever reported during 1948. This was the lowest number on record with the excep-Only 5

There were 163 cases of <u>dysentery</u> reported, 49 of which were amoebic dysentery, 19 bacillary, and 94 unspecified as to type. The rate for the Indian population, 63.4, was much higher than the rate for the White population, 5.3, and the Negro population, 7.5.

Chart 1 shows the three-year average incidence of the enteric diseases, typhoid fever, paratyphoid fever, and dysentery, according to the months in which they occurred.

Chart 1

Distribution of Reported Cases of Enteric Diseases by Month Oklahoma, 1946-1948



Most of the 111 cases of food poisoning that occurred in 1948 were the result of two serious outbreaks, one of which occurred in February in Tulsa and the other in June in Ottawa County. There were fifty cases reported from each area. The Tulsa outbreak was reported as food-borne salmonella infection. The Ottawa County cases were diagnosed as chemical food poisoning.

<u>Infectious diarrhea of the newborn</u> was reported in 16 infants, giving a rate of 0.7 per 100,000 estimated population. This was more cases than were reported the previous year.

Malaria

There were 401 cases of malaria reported in 1948, giving an occurrence rate of 17.2 per 100,000 estimated population. Only in 1946, when 308 cases were reported, were fewer cases know to have occurred in Oklahoma. Although the six malaria deaths and death rate of 0.3 were a decided increase over the 1947 figures when only one death was attributed tomalaria, they were still low compared with the other years on record.

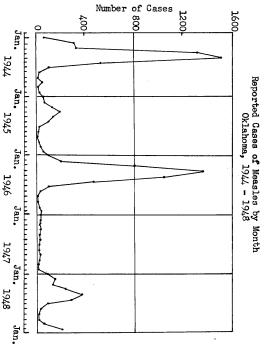
Eight military cases of malaria were reported, all of which were stated to have been contracted outside the United States and were, therefore, not included in the tabulations.

Most of the malaria cases were distributed through the east and central portions of the State, with only two cases reported from the western part, one in Roger Mills County and one in Woods County.

Measles

A total of 1,633 cases of measles were reported in 1948 and 7 deaths were attributed to this disease. The attack rate was 70.0 and the death rate 0.3. Reports of measles were received every month, but the greatest number occurred in the Spring; approximately 53 per cent of all the cases reported during the year occurred in April, May, and June. Chart 2 shows reported cases of measles by months for 1944 - 1948.

Chart 2



Measles was reported most often in small children; of the cases reported with information as to age, approximately 41 per cent were under five years of age and another 48 per cent were from 5 - 9 years of age. More deaths from measles occurred in the younger age groups also. The five-year average death rate for measles was 9.1 for infants under one year of age, as compared to a measles death rate of 0.7 per 100,000 estimated population for all age groups.

More cases of measles were reported from urban than from rural areas, approximately 66 per cent of all the cases reported were from cities of 2,500 or more population, 18 per cent of the cases were from Oklahoma City and Tulsa alone.

In addition to the 1,633 cases of measles reported,172 cases of German measles occurred during the year,102 of which were from Logan County.

Meningococcal Meningitis

The case fatality rate, 13.8, computed for the 9 deaths and 65 cases of meningitis reported in 1948, and the corresponding rate, 13.7, for 1944 were the lowest recorded fatality rates.

Thirty-three, or approximately 43 per cent, of the 77 counties reported at least one case of meningococcal meningitis. Oklahoma County reported 12 cases; Comanche, LeFlore, and Thisa Counties 5 each. No other county reported more than 3 cases. More than half, or about 55 per cent, of the reported cases were from rural areas.

Table 3 shows the reported cases by age group with the number of deaths and case fatality rate for each group. Approximately 75 per cent of the cases, and 78 per cent of the deaths were under 20 years of age. The rate of attack was highest in the Indian racial group, with a rate of 6.3. The corresponding rates for the White and Negro groups were 2.7 and 1.9 respectively.

Table 3

Reported Cases and Deaths from Meningococcal Meningitis
by Age Groups

Under 1 year 1-4 years 5-9 years 10-19 years 20-29 years 30 years and over Unknown	Total	Age Group
27208784	65	Reported Cases
M4411M1	9	Deaths
40.0 23.5 16.7	13.8	Case Fatality Rate

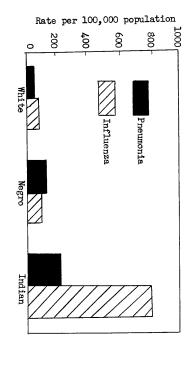
Pneumonia and Influenza

During the year 1,648 cases of pneumonia were reported in Oklahoma. The attack rate of 70.6 per 100,000 population was one of the lowest on record. Of the reported cases 504 were bronchopneumonia, 372 lobar pneumonia and the remaining 772 of other types or unspecified as to type. The rate of occurrence was highest for the Indian population. The rate for this group was 213,9 per 100,000 estimated population, as compared with 59.7 for the White population and 111.9 for the Negro group. Almost half of the reported cases, approximately 46 per cent, occurred in the first three months of the year.

The extremely high number of reported cases of influenza recorded in 1947 was followed in 1948 by a comparatively low number. There were 3,972 cases reported, giving a rate of 170.1 per 100,000 estimated population. Most of the cases occurred in January, February, March, and April. Approximately 79 per cent of all the cases were reported during those months. Again the occurrence rate was highest for the Indian ratel group; the rate for this group was 804.8 and the corresponding rate for the White population was 75.2 and the rate for the Megro population 95.8. There were 119 deaths attributed to influenza during the year; as in the reported cases, the death rate was highest in the Indian group, 4.3, the rates for the White and Negro groups were 4.5 and 9.3, respectively. Chart 3 compares the death rates from pneumonia and influenza for the White, Negro, and Indian racial groups.

Chart 3

Death Rates for Pneumonia and Influenza by Race Oklahoma, 1948



Poliomyelitis

Although 1948 was not an epidemic year for pollomyelitis, a larger number of cases than was expected was reported in Oklahoma. The 369 cases were a decided increase over the 59 cases reported in 1947 although the number did not reach the 434 peak of 1946 nor approach the record high of 594 cases reported in 1943. However, the case fatality rate, 9.2, computed from 34 deaths which occurred in the State was high compared with the corresponding figures for the 1943 and 1946 epidemics which were 5.6 and 7.8 respectively.

Approximately 70 per cent, 257, of the 369 reported cases of poliomyelitis were under 10 years of age. There were 22 deaths attributed to
poliomyelitis in children in this age group, giving a case fatality rate
of 8,6. Table 4 shows the reported cases of poliomyelitis for the year
broken down by age group with the number of deaths and case fatality rate
for each group.

Table 4

Reported Cases and Deaths from Poliomyelitis by Age Group

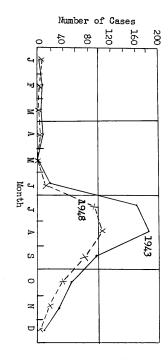
Under 1 year 1-4 years 5-9 years 10-14 years 15 years and over Unknown	Total	Age Group
20 113 124 59 59	369	Reported Cases
. 0.12rv	33	Deaths
15.0 21.3 11.3 11.3	8.9	Case Fatality Rate

The rate of occurrence in the White population was more than twice as high as the corresponding rates in the Negro and Indian groups. The rate for the White population was 16.7 per 100,000 estimated population, for the Negro 6.8 and for the Indian 7.9.

Incidence of poliomyelitis was pretty well scattered over the State with approximately 86 per cent of the counties reporting cases. Custer County had the largest attack rate,27 cases were reported from thatCounty, with a rate of 118.0 per 100,000 estimated population. Three other counties, Beaver,Ellis, and Jackson Counties, had rates of more than 50.0. The largest incidence of poliomyelitis occurred in July, August, and September when 277, approximately 75 per cent,of the total cases were reported. The peak was reached in August, and although a large number of cases was reported in September, there was a decided decrease. No cases were reported to dases of poliomyelitis are shown by months for 1943 and 1948.

Chart /

Distribution of Reported Cases of Pollomyelitis by Months Oklahoma, 1943 and 1948



Respiratory Streptococcal Infections

The 591 cases of scarlet fever reported in 1948 and rate of 25.3 per 100,000 estimated population was a slight increase over the last two years when unusually low numbers were recorded, but lower than any number previous to that time. No deaths were attributed to scarlet fever during the year. Prior to 1947, when a similar absence of deaths was recorded, there was no year on record when fewer than 3 deaths were reported. Scarlet fever occurred more often in small children, approximately 82 per cent of the cases with the age known were less than 10 years of age and only 2 per cent over 20 years of age. The attack rate in the White group, 27.2, for the Negro, 2.5, and for the Indian, 6.3, per 100,000 estimated population.

Reported dases of septic sore throat were slightly less than last year and the year before. There were 176 cases of this disease reported with a rate of 7.5. Twelve deaths were assigned to septic sore throat, making a case fatality rate of 6.8. Unlike scarlet fever, septic sore throat occurred more often in the older age groups, Only 34 per cent of the cases with the age known were less than 10 years of age and 44 per cent were more than 20. Table 5 shows the reported cases and deaths by age group and the case fatality rate for each group for scarlet fever and septic sore throat for the years 1945 - 1948.

Table 5

Reported Cases and Deaths from Respiratory Streptococcal Infections by Age Groups 1945 - 1948

	Sca	carlet Fev	er	Septic	c Sore Th	hroat
Age Group	Reported Cases	Deaths	Fatality Rate	Reported Cases	Deaths	Fatality Rate
Total	2,493	13	0.5	748	63	8.4
Under 1 year	39	<u>بر</u>	2.6	15	7	46.7
1-4 years	199	٠	0.8	116	18	15.5
5-9 years	1,020	4	0.4	112	6	5.4
10 years and over	556	w	0.5	418	32	7.7
Unknown	217	ı	1	87	1	1

Whooping Cough

The incidence of whooping cough, 1,084 reported cases, was the highest since 1941 with a correspondingly high rate of 46.4 per 100,000 estimated population. There were 46 deaths, giving a death rate of 2.0 and a case fatality rate of 4.2. There is a great deal of interest in whooping cough in infants. Approximately 26 per cent of the reported cases with information as to age available, were less than one year of age and almost 46 per cent under the age of 10. The deaths attributed to whooping cough were also concentrated in these younger age groups. Approximately 76 per cent of all the deaths were under one and there were modeaths from whooping cough in persons over 10 years of age. In Table 6 the reported cases and deaths are distributed according to age group and the case fatality rate is given for each group.

Table

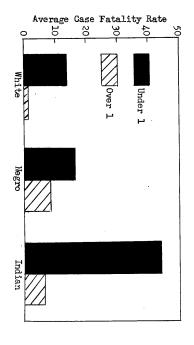
Reported Cases and Deaths from Whooping Cough by Age Group

Under 1 year 214 35 1-4 years 340 10 5-9 years 248 1 10 years and over 34 -	Total 1,084 46	Donouted Coase Dontha
16.4 2.9 0.4	4.2	Case

The attack rate for the Indian racial group was extremely high compared with the rates for the other groups. The rate for the White population was 36.6, for the Negro 28.0, and for the Indian 136.0 per 100,000 estimated population. The case fatality rate was highest for the Indian group also. The case fatality rate for the different racial groups are shown in Chart 5 for the age group under one year and those one year of age and over. In all racial groups the case fatality rate for those under one was much higher than the fatality rate for those older. The greatest difference was observed in the Indian population with a fatality rate of 44.2 for those under one and only 6.3 for those one year of age and over.

Chart 5

Whooping Cough Case Fatality Rate for Cases Under One and Over One for Each Racial Group Oklahoma, 1946 - 1948



Other Acute Communicable Diseases

There were 30 cases of <u>Bocky Mountain spotted fever</u> reported and one death assigned to this disease during 1948 in the State. Oklahoma County reported nine cases, Caddo, LeFlore, Marshall, and Payne Counties each reported two cases.

The lowest number for <u>smallpox</u> ever recorded was reported in 1948 when only one case occurred. This case was reported in March from Haskell County.

Reported cases of <u>tularemia</u> were a little below the numbers recorded for the two preceding years, but the number, 84, and rate, 3.6 per 100,000 estimated population, were high compared with the earlier years on record;

this can, perhaps, be accounted for by the fact that, for the three years 1946, 1947, and 1948, cases reported only by positive laboratory reports from the State Department of Health Laboratory were included in the totals.

Typhus fever was rarely reported. Only one case was reported during the year, this case was from Comanche County and was reported in August.

Kiowa County reported almost a fourth, 21, of the 86 reported cases of undulant fever. The attack rate for this county was 96.3 compared with an attack rate of 3.7 for the State as a whole. The other cases were well scattered over the State, Kay County reported seven cases, Hughes and Jefferson Counties each reported four, and the remaining cases were distributed one, two, or three to a county.

In 1948 there were four cases of <u>erysipelas</u> reported, one each in Harper, Hughes, Oklahoma, and Roger Mills Counties. Two cases of <u>mycosia</u> occurred in the State, one in Carter and the other in Roger Mills County. A case of <u>infectious hepatitis</u> occurred in June and another in October. One case of <u>dengue fever</u> was reported in April from Creek County.

Cancer

There were 1,636 cases of cancer reported in 1948. This was the first time a complete year's data were available for tabulation. When the 1,636 cases were broken down according to the primary site, it was found the primary site on the skin. The next largest group, 343, had the uterus as the primary site; this was 21 per cent of the total and the primary site; this was 21 per cent of the total. The buccal cavity and pharynx, with 136 cases, and the digestive organs and peritoneum, with 193 cases, together accounted for another 20 per cent. Leukemia was seldom reported, with only 10, and Hodgkin's disease last frequently, being reported in only 3 cases. Table 8 on Page 14 shows the reported cases broken down by primary site with the number and per cent for each site.

More than half, approximately 56 per cent of the reports, did not state whether metastasis had or had not occurred. On those reports that included this information, however, metastasis had occurred in 47 per cent of the cases. Malignancies of the respiratory system metastasized most often; 84 per cent of the reports that included this information stated that metastasis had occurred. Metastatic sites were reported in 76 per cent of the cases with the female genital organs as the primary site, and in 74 per cent of those with the male genital organs as the primary site. Metastasis of skin cancer was rare; in the group where information concerning metastasis was available, only 11 per cent metastasized.

More than one-fourth of all the cancer reports received did not include information on biopsy. Of those reports that stated whether or not a biopsy was performed, 76 per cent reported there had been a biopsy and 24 per cent reported no biopsy.

More than half, approximately 55 per cent of the reported cases of cancer, were in females. Of these 899 cases of cancer, 62 per cent had the primary site in the breast, uterus, or female genital organs. In every primary site common to both sexes there were more cases reported for males than females. In cases with the primary site in the respiratory system, approximately 88 per cent of the cases were male; 85 per cent of the cases of malignancy of the buccal cavity and pharynx were male, and 67 per cent of malignancies of the skin were male.

The rate of occurrence in the White population was highest, being 70.5 per 100,000 estimated population. The rate for the Negro population was almost as high, 68.4, but the Indian rate was quite low, only 12.7 per 100,000 estimated population.

Table

Reported Cases of Cancer by Race and Sex, and Rate per 100,000 Estimated Population by Race 1948

Total 1 White 1 Non-white Unknown	Race
1,636 1,488 118 30	Total Number
70.1 70.5 52.7	Rate
737 688 39 10	Male Se
899 800 79 20	Female

In the age group 55-64 there were 388 cases of cancer, this was the largest number in any age group. There were almost as many, 381, in the 65-74 age group. The number of reported cases of malignancy increased with each increasing age group to the 388 peak in the 55-64 year age group. Probably the smaller number in the 65-74 and still smaller in the 75 and over age group, however, were due to the smaller population in these groups.

Of the 1,636 reported cases of cancer, 45 gave an out-of-state residence, the other 1,591 were distributed throughout the State with every county represented. Oklahoma County that sa the residence in the greatest number of cases, 39, of which 285 were Oklahoma City residents. There were 141 reports that gave Tulsa County as the residence with 113 from Tulsa City. Creek and Okmulgee Counties were each given as the residence on 47 reports and Pittsburg and Seminole on 43.

Cancer Cases Reported by Death Certificates Only

Death certificates listing cancer as the cause of death were checked by an accumulative morbidity file which was supposed to include all cases known at the time cancer was made reportable on August 15, 1947. It was discovered that 2,293 of the deaths had not been previously reported cases cases. These unreported cases could not be added to the reported cases to compute an incidence rate since the year of onset or first diagnosis for the cases reported by death certificates only was not known.

Approximately 40 per cent,922 of the cases reported by death certificates gave malignancy of the digestive organs and peritoneum as the cause of death. Cancer of the uterus and other female genital organs comprised 12 per cent of the total and cancer of the male genital organs almost 9 per cent. Although cancer of the skin was reported most often in the case reports, only 79 or about 3 per cent of the death certificates for unreported cases gave skin malignancies as the cause of death. Table 8 shows the cases of cancer reported by death certificate only broken down by primary site with the number and per cent for each site, compared with the cases reported through the regular channels.

Table 8

Gases of Cancer Reported Through Regular Channels and by Death Certificate Only Number and Per Cent by Primary Site of Lesion 1948

7	Cases Reported Through Regula Channels Number Per Cen	Cases Reported Through Regular Channels There Par Cent	Cases Re Death Ce	Cases Reported by Death Certificate only Number Per Cent	
Total	1,636	1,001	2,293	100.0	
Hod <i>e</i> kin's disease	w	0 2	25	1,1	
Buccal cavity and pharynx	136	æ w	63	2.7	
Digestive organs and peritoneum	193	11.8	922	40.2	
Respiratory system	74	4.5	163	7.1	
Uterus	343	21.0	208	9 . 1	
Other female genital organs	45	် လ	55	2.4	
Breast	172	10.5	175	7.6	
Male genital organs	42		201	. o	
Urinary organs Skin (except vulva, scrotum, and	97	٥.	07	J• 7	
anus)	355	21.7	79	3.4	
Brain and other parts of central	Ħ	0.7	3 6	1,6	
Other and unspecified organs	183	1.2 6	169	7.4	
Leukemia	ţ	(

The rate for cases reported by death certificates was highest in the White population, 98.9 per 100,000 estimated population as compared with 93.3 for the Negro and 79.2 for the Indian.

More than half, almost 56 per cent, of all the cases reported by death certificates were in persons 65 years of age or older. There were 35 cases in persons 14 years of age or younger.

Tuberculosis

During the year 2,348 cases of tuberculosis were reported, with a rate of 100.6 per 100,000 estimated population, and 622 deaths were attributed to this disease. Of the reported cases, 2,281 were tuberculosis of the respiratory system and 67 were other forms of tuberculosis.

When the 2,281 cases of pulmonary tuberculosis were distributed according to stage and activity, it was found that 691 or approximately 30 per cent were inactive, arrested, or apparently cured, another 26 per cent were unqualified as to stage, and the remaining 44 per cent were in some stage of activity. Of the active cases, approximately 24 per cent were minimal active, 39 per cent moderately advanced active and the remaining 37 per cent far advanced active.

Approximately 24 per cent of the non-respiratory tuberculosis were of the meninges, another 22 per cent were miliary tuberculosis. No cases of tuberculosis of the skin were reported. Table 9 shows the reported cases of tuberculosis by type, stage and activity, and by race.

Table 9

Reported Cases of Tuberculosis by Type, Stage and Activity, and by Race

Millary	Other organs	Genito-urinary system	Lymphatic system	Skin	Bones and joints	Vertebral column	Intestines and peritoneum	Meninges	Tuberculosis of other sites:	Unqualified	Ap. cured (any stage)	Arrested (any stage)	Inactive (any stage)	Far Adv., active	Mod. Adv., active	Minimal, active	respiratory system:	Tuberculosis of	Type Stage and Activity	
15	, ı	00	6	1	5	F	6	16	67	597	16	670	<u>ر</u>	364	3 89	240	2,281		Total	
4) 1	6	. Un	,	4	œ.	,	9	42	450	15	609	4	278	314	201	1,871		White	
^) I	ı	۲	ı	t	Д,	4	w	11	83	1	21		47	37	12	200		Negro	
4	- 1	N	1	1	י	N	Д.	4	¥	57	<u> </u>	38	μ.	37	34	26	194		Indian	
,	ı	1	1	ı	ı	1	ı		ı	7	1	N	1	N	4	ب	16		Unknown	

The rate of occurrence was highest in the Indian population. The rate for this racial group was 329.5 per 100,000 estimated population. The rate for the Negro group, 131.2, was higher than that for the White group, 90.6. Almost half, approximately 49 per cent, of the Negro cases specified as active were far advanced, while only 38 per cent of the Indian and 35 per cent of the White active cases were far advanced.

The cases of tuberculosis reported for the Indian population were in younger age groups than for the Negro and White; 47 per cent of all the reported cases with the age known were under 35 years of age in the Indian group, while 33 per cent of the Negro and only 27 per cent of the White were in this age group.

The tuberculosis death rate, like the attack rate, was highest in the Indian population and lowest in the White. The rates were, for the Indian, 129.9; for the Negro, 64.7; and for the White, 20.4 per 100,000 estimated population.

Only seven per cent of the total number of reported cases were reported by death certificates; and another one per cent were reported by local health departments as being unknown cases until the death certificates were received. This was low compared with the corresponding figure for 1946 which was 13 per cent and for 1947 which was 12 per cent. This would indicate that the extensive case finding programs in progress are meeting with success. Table 10 shows the reported cases of tuberculosis, by source of report, with the per cent from each source.

Table 10

Reported Cases of Tuberculosis Among Civilians by Source of Report

Practising physicians County health departments Tuberculosis sanatoria Mental institutions Other hospitals and institutions Other public agencies Death certificates Positive laboratory reports Sources out of state Other	Total cases reported	Source of Report
222 784 329 203 263 266 206 167 2 34	2,346	Number
33.4 4.0 7.1 8.8 7.1 0.1 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1	100,0	Per Cent

Reported cases of gonorrhea totaled 7,082 in 1948 with an attack rate of 167.1 for the White population, 1,924.3 for the Negro, and 356.4 for the Indian. Approximately 61 per cent of the reported cases with the sex known were male, as shown in Table 11. Gonorrhea was reported more often in the younger age groups for the Negro population than for the other racial groups. Approximately 72 per cent of the reported cases in Negroes were under 25 years of age, while only 59 per cent of the Indian and 57 per cent of the White cases were in this age group.

Venereal Diseases

Table 11

Reported Cases of Venereal Diseases by Stage and Disease, by Sex

Gonorrhea Syphilis, all stages Primary and secondary Early latent Late and late latent Congenital Not stated Ophthalmia neonatorum Other venereal diseases Chancroid Granuloma inguinale Lymphogranuloma	Disease and Stage
7,082 5,727 1,152 1,539 2,489 2398 2398 2399 91 70	<u>Total</u>
4,281 2,756 651 589 1,267 126 123 73 73 58	<u>Male</u>
2,789 2,969 501 950 1,220 1182 116 3 18 18 18	<u>Female</u>
11111110110	Unknown

The number of reported cases of syphilis, 5,727, and rate 245.3 were the lowest number and rate since 1938. Again the attack rate for the Negro population, 1,255.1 per 100,000 estimated population, was far higher than the rates 151.7 for the White and 296.2 for the Indian.

Only 21 per cent of the reported cases with stage specified were still in the primary and secondary stages, while 45 per cent were reported to be late and late latent. Approximately 5 per cent of the reported cases in the White population, 6 per cent of the Negro cases, and 8 per cent of the Indian cases were congenital syphilis.

The greatest number of cases in the primary, secondary, and early latent stages were found to be in the younger age groups. Approximately 72 per cent of the cases in the primary and secondary stages and 63 per cent of the early latent cases were under 30 years of age. Only 10 per cent of the late and late latent cases were in this younger age group. The reported cases of syphilis for specified stages, by age groups, with the number and per cent for each stage in each group are shown in Table 12.

Table 12

Reported Cases of Syphilis for Specified Stages, by Age Group

	Primary a Secondary	Primary and Secondary	Early	Early Latent	Late and Late Late	and Latent
Age Group	Number	Per Cent	Number	Per Cent	Number	Per Cent
Total cases with age specified	1,124	100.0	1,464	99.9	2,297	100.1
Under 20 years	225	20.0	209	¥.3	29	1.3
20-24 years	3 90	34.7	416	28.4	69	3 ,0
25-29 years	198	17.6	292	19.9	134	5.8
30-34 years	109	9.7	185	12.6	2 3 8	10.4
35-44 years	136	12.1	245	16.7	725	31.6
45 years & over	66	5.9	117	8.0	1,102	48.0

Symbols Used in Tables

Number or rate is zero
 Item not applicable
 Rate is more than 0 but legs than 0.5

locky Mountain spotted fever learlet fever sptic sore throat 1,005 458 379 3,072 5,918 1,972 4,773 33 230 1,829 1,829 1,829 1,829 1,246 623 8,614 1,362 1,362 1,362 1,362 1,362 0.1 53.2 26.6 37.4 368.0 58.2 20.9 16.1 9.1 42.9 19.6 16.1 10.3 131.2 252.8 84.2 252.8 9.8 9.8 8.2 78.1 2.8 785 535 649 11,088 11,088 1,872 1,872 1,872 1,172 113 113 115 115 10 926 596 13,661 1,661 13,661 13,766 33.9 23.1 28.0 0.5 121.1 478.8 80.9 19.2 1.6 17.8 6.4 134.0 0.0 0.4 40.0 25.7 8.5 254.6 71.8 2.7 2.7 0.1 4.8 734 1 1 2,008 2,551 1,088 2,429 1,089 2,703 2,703 38 12 859 716 8,132 1,538 1,538 1,538 1,538 38.4 32.0 1.9 363.4 68.8 2.3 10.2 5.2 92.9 92.2 13.8 14.2 641.2 90.8 108.7 1.3 48.5 121.0 1,029 399 328 3,626 3,701 1,516 6,331 1,490 1,490 1,589 1,589 22 772 342 342 20 8,914 1,461

47.8 18.5 16.3 16.8 171.9 70.4 294.1 1.8 69.2 3.5 73.8

1 841 239 139 1,469, 6,841 1,421 2,376 651 1,446 651 1,446 59,

mallpox yphilis uberculosis, all forms ularenia

1.0 35.9 15.9 0.9 414.1 67.9 1.9 9.3

1,030 1,030 1,030 19 1,751 1,7

phoid, paratyphoid fevers phus fever dulant fever ooping cough

		7761	K.	1945	5	1946	6	19/7	77	1948	8	
	Disease	Mumber	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	
280 780 780 780 780	Anthrex in men Chickenpox Dengue Diphtheria	337 851	40.4	300 - 682 2	0.1 28.6 12.6	632 -	26.5	966 209	9.0	1,417 1 165	60.7 0.0 7.1	
4800 682 682 682	Dysentery Encephalitis, infectious Gonorrhea Influenza	242 25 27 27 27 27 27 27 27 27 27 27 27 27 27	11.9 1.1 325.0 580.2	6,924 9,216 8	8.9 0.3 386.6 290.4	80 24 11,050 6,585	3.4 1.0 463.8 276.4	149 13 9,335 25,095	6.4 0.6 403.7 1,085.1	163 8 7,082 3,972	7.0 0.3 303.4 170.1	N.05
680 580 580	Malaria Measles Meningitis, meningococcal Mimps	1,408 4,316 117 460	69.4 212.6 5.8 22.7	1,101 841 84 759	35.3 35.3 31.8	308 4,387 77	12.9 184.1 3.2 19.0	536 168 67 660	23.2 7.3 28.5	401 1,633 65 887	17.2 70.0 2.8 38.0	A
281 440-49 080-4 950	28' Pellagra 49049 Zhaumonia, all forms 0900 Poliomyelitis, acute 950 Rabies in man	2,346 2,346 34	3.3 115.6 2.7	1,958 200	1.8 82.1 8.4	1,709 434 2	1.0 71.7 18.2 0.1	2,002 59	2.6 2.6	1,648 369	2.3 70.6 15.8	
1.50 0.50 4°/	Rocky Mountain spotted fewer Scarlet fewer Septic sore throat	1,003 1,003	0.7 49.4 6.9	1,003 19,	1.0 42.1 8.1	30 546 180	1.3 7.6	36 198	1.6 15.3 8.6	30 591 176	1.3 25.3 7.5	
650 510-600 500 600 600 600 600 600 600 600 600	Smallpox Syphilis Tuberculosis, all forms Tularemia	8,142 2,867 10	0.3 401.1 141.2 0.5	13 5,978 2,246 25	0.5 250.8 94.2 1.0	2,664 86	0.7 331.7 111.8 3.6	7,177 2,435 130	0.2 310.3 105.3 5.6	1 5,727 2,348 84 1 Jd1)~	0.0 245.3 100.6 3.6	٧ ٨٠,١٧
040 040	Typhoid, paratyphoid fevers Typhus fever Undulant fever Thooping cough	109 1 50 426	21.0	100 37 713	4.2 0.1 1.6 29.9	58 677 677	2.4 0.3 1.5 20.1	139 4 89 1,055	6.0 0.2 3.8 45.6	79 1 86 1,084	3.4 3.7 46.4	

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51551145458281451115888413455882131112 8-77-8-11-150-14-24-1-14-38-15-23-55-28-24-1-4-7 8.1541177782012121881182528212212212212 78.100695128.232.1328835.144388.1293.18568

	TABLE	Ħ	TABLE III. REPORTED CASES OF COMMUNICABLE DISSASES, BY MONTHS, OKLAHOMA, 1948	CASES OKI	OKLAHOMA, 1948	IONICABL	E DISEAS	SES, BY	MONTHS,				
Disease	Total	Jan.	Feb.	Mar.	Apr.	Мау	June	July	Aug.	Sept.	Oct. Nov.		α
gees	28,871 3,686	3,686	2,969	3,051	2,856	687,2	2,236	1,969	1,910	1777	2,969 3,051 2,856 2,483 2,236 1,969 1,910 1,771 1,610 1,957 2	1,957	N
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DOX	1.417 246	226	1/3	267	186	8	267 186 99 61 22 10	2	ĕ	۵	17	Š	

Mhc Vir	Ver	U.S.	Per	Tyr	2	Tut	71.0	161	Syr	Sme	Sel	Soc	Roc	Re.	Pue	Pol	Pne	Pi	101	કુ	Muz	Hou	M	In	H _X	8	60	En.	D	-	J E	C C	An	Γ,	ed .	1
Vincent's angina Whooping cough	Venereal diseases, other	Indulant fever	Paratyphoid fever	yphoid fever	ularemia	hiberonicate, respiratory	Taolione	e canus	Syphilis	llpox	Septic sore throat	carlet fever	locky Mountain spotted fever	Rabies in man	Puerperal septicemia	Poliomyelitis, scute	Pneumonia, unspecified	sumonia, pronental	ollagra	phthalmia neonatorum	fumps	eningitis meningonogeal	alaria	Influenza	Hookworm	Conorrhea	German measles	Encephalitis, infectious	Dysentery, unanecified	Promotory bodiles	Dysantery smooth	Chickenpox	Anthrex in men	meaning pope out to total	Two 1	Disease
780°T	9	8,	٠,	72	ge :	7,67 1,001	3	2/4	5,727	,	176	591	30		١.	369	70.5	300	3	w	80	1,633	401	3,972	21	7,082	172	œ.	9 ;	1 *	607	1,417		Number	2,334,455	Total
46.4	3.9	3.7	0 0 0 N	<u>س</u> ده	3.6	2.9	31	7.0.4	245.3	0.0	7.5	25.3	1.3	. :	0	15.8	33.1	17.	20	0.1	38.0	20.0	17.2	170.1	0.9	303.4	7.4	0.3		٠ ا م	٥.	60.7	•	Rate	455	
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0.1 36.6	1.7	3.6	0.2	2	N I	000	8.0	* O	151.7	0.0	6.9	27.2	1.1	. ;	0	16.7	20	18.0	1.9	0.0	26.7	61.9	6.8	75.2	0.9	167.1	5.6	0.3	0 0	2 !	٥,٠	55.8	-	Rate	.543	Lte
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136.2	7.9	1:6		. !	F.	000	300	,	296.2		12.7	6.0	1.6		. :	7.0	100	6,6			00	45.9	356.4	804.8	2	356.4	3.6	1.6	30	,	. t	82.4		Rate	Ğ	an .
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OF COMMUNICABLE DISEASES, NUMBER AND RATE (NUMBER FER 100,000 ESTIMATED POPULATION), BY RACE, OKLAHOMA, 1948

TABLE I. REPORTED CASES OF COMMUNICABLE DISEASES, NUMBER AND RATE (NUMBER FER 100,000 ESTIMATED POPULATION), OKLAHOMA, 1999-1948

		LL CASES			WHITE			NEGRO			INDIAN			UNKNOWN	
Disease	Male	Female	Unknown	Male	• Female	Unknown	Male	Female	Unknown	Male	Female	Unknown	Male	Penale	Unknown
Anthrax in man Chickenpox Diphtheria Dysentery	639 88 56	576 77. 60	202 47	581 83 49	549 72 41	48 21	23 1 5	10 1 4	- - 3	32 4 2	14 4 15	- 6 - 23	3 -	3 -	148
Encephalitis, infectious German measles Gonorrhea Hookworm	6 37 4,281 8	2 29 2,789 13	106 12	2,114 7	2 29 1,413 12	55 -	2,004	1,090	=	1 1 78 1	146	1	1 85	140	์ ม ร
Influenza Malaria Measles Meningitis, meningococcal	821 38 681 36	786 28 704 28	2,365 335 248 1	653 33 638 33	593 21 645 24	341 90 23	54 5 12 1	54 1 16 2	46 24 - -	80 - 10 2	81 6 19 2	347 219 - -	34 21	58 - 24 -	1,631 2 225 1
Numps Ophthalmia neonatorum Pellagra Pneumonia, all forms	377 14 848	274 3 39 739	236 - 61	362 11 664	257 1 30 591	1 - 4	3 - 2 95	8 2 6 85	=	2 - 1 82	2 - 3 53	=	10 - - 7	7 - 10	235 - - 57
Policmyelitis, acute Puerperal septicemia Rocky Mountain spotted fever Scarlet fever	217 - 14 303	152 1 16 278	10	207 11 298	146 1 13 269	- - 7	. 8 - 1 -	3 - - 4	. =	2 - - 2	3 - 1 2	=	- - 2 3	- 2 3	3
Septic sore throat Smallpox Syphilis Tetanus	84 1 2,756 6	78 - 2,969 3	14 - 2 -	75 1 1,659 3	71 1,543 2	=	3 891 2	1,127 -	=	70 1	116 1	1	136 -	183	14
Trachoma Tuberculosis, respiratory Tuberculosis, other forms Tularemia	149 1,295 38 60	167 986 29 23	27 - - 1	92 1,058 27 32	96 813 15 11	=	9 127 5	16 73 6 1	=	48 100 6 3	55 94 8 4	=	10 - 25	- - 7	27 - 1
Typhoid, paratyphoid fevers Typhus fever Undulant fever Venereal diseases, other Whooping cough	38 - 52 73 391	41 1 33 18 468	1 225	33 - 48 30 330	39 - 27 6 396	- - - 46	5 - 36 21	2 - 11 24	-	- - 4 23	1 1 1 30	33	- 4 3 17	- 5 - 18	146

TABLE V. REPORTED CASES OF SELECTED COMMUNICABLE DISEASES BY AGE, OKLAHOMA, 1948

	A71					-		-		ge in I	MATE					-		
Disease	Ages	Under 1 Year	1	2	3	4	5-9	10-14	15-19		25-29	30-34	35-44	45-54	55-64	65–74	75 & Over	Unknown
Anthrax in men Chickenpox Diphtheria Dysentery	1,417 165 163	- 42 11 29	47 21 10	61 16 5	67 13 2	95 17 2	683 43 4	- 99 19 4	- 24 8 3	16 - 2	- 7 8 8	- 7 4 7	- 6 2 12	1 3 7	2 - 6	1 - 6	1 - 5	258 51
Encephalitis, infectious German messles Gonorrhea Hookworm	8 172 7,082 21	1 3 10	- 8 1 1	6 1	5 11 1	- 4 7	2 20 39 2	- 4 60 3	1,566 3	2,788 1	1,356 1	557 3	1 437	109 4	1 - 39 1	2 17 1	1	1.08 83
Influenza Malaria Measles Meningitis, meningococcal	3,972 401 1,633 65	48 - 58 5	81 100 10	76 123 2	48 1 123 2	35 3 143 3	132 6 638 6	75 6 106 10	82 7 23 8	111 4 5 4	78 9 7 3	84 - 5 -	160 10 8 2	184 6 - 3	115 7 - 2	113 6 1	74 1 1	2,476 335 292 4
Mumps Ophthalmia neonatorum Pellagra Pneumonia, all forms	887 3 53 1,648	1 3 - 304	6 - 103	13 - 68	25 - 40	27 - 36	205 - 85	81 - 25	57 1 27	37 - 27	20 - 32	29 1 35	38 - 4 72	8 - 5 76	2 9 109	1 16 165	1 17 349	336 - - 95
Policmyelitis, acute Puerperal septicemia Rocky Mountain spotted fever Scarlet fever	369 1 30 591	20 - - 9	29 - 18	38 - 1 38	20 - 4 46	26 1 80	124 5 271	59 - 4 77	23 1 12	13 - 6	9 1 3 4	3 - 1	5 6 2	=	1	=	=	- 4 27
Septic sore throat Smallpox Syphilis Tetanus	176 1 5,727 9	3 - 38 3	5 - 9 -	9 - 5	5 7 -	3 - 3	27 40	12 90 3	23 516	14 950	.17 657	11 568	11 1,156 1	9 761	3 365 1	2 183 1	1 32	21 347
Trachoma Tuberculosis, respiratory Tuberculosis, other forms Tularemia	343 2,281 67 84	1 1 3	2 4 2 -	5 1 3	4 2 1	10 2 1	87 16 3 -	107 17 3 4	32 74 5 5	3 167 2 4	200 4 5	170 5 2	9 388 9 6	9 417 10 4	387 9 11	7 267 3 4	1 128 4	50 40 - 39
Typhoid, paratyphoid fevers Typhus fever Undulant fever Venereal diseases, other Whooping cough	79 1 86 91 1,084	214	7 - - 99	1 - - 74	2 1 79	4 - - 88	13 1 - 248	11 - 2 1 25	4 - 18 3	4 - 7 33 1	3 8 18 2	10 10	12 29 9	3 - 8 1 1	6	2 -	2 -	5 - 11 - 248

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Ankhres in man Ohloksepox Diphberia messis Dysentery, unspecified Dysentery, unspecified Dysentery, unspecified Energy tits, infectious German messis Genories Managatis, meningeoccal Managatis, meningeoccal Managatis, meningeoccal Managatis, boombial Fromments, unspecified Collowslitis, soute Fromments, poster Fromments, poster Fromments, poster Fromments, poster Fromments, poster Fromments, poster Managatis, control Trachema Septia ere throat Septia ere throat Septials Testans Trachema Trache	Disease	Interes Disease Anthrax in aan Chibrary anobia Dysentery anobia Dysentery ballary Dysentery ballary Dysentery ballary Dysentery ballary Dysentery ballary Dysentery mappediad Enophalitis, infectious Genram seades Felicia politics Felicia po
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Thooping cough	Vincent's angina	Venereal diseases, other	Undulant fewer	Typnus rever	raratyphold fever	Typnoid lever	Tularemia	Indercurosis, other forms	inderduces, respiratory	Ti-bononia and	Tueshore	Potonia	Sephelia	Copera acta curotte	TOTAL TOTAL	nocky Mountain spotted fever	Rables in man	ruerperal septicemia	Poliomyelitis, acute	Pneumonia, unspecified	Pneumonia, lobar		Pellagra	Ophthalmia neonatorum	Mumps	Meningitis, meningococcal	Measles	Malaria	Influenza	Нооктога	Gonorrhea	German measles	Encephalitis, infectious	Dysentery unspecified	Dysantary bacillam		Diphtheria	Chickennor	Anthrex in men	Disease	ugnoo Aurdoonu	Vincent's angina	venereal diseases, other
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Disease	Custer	Delaware	Dewey	Ellis	Garfield	Garvin	Gredy	Grant	Greer
Anthrex in men	•	-		-	ı				'
Chickenpox	w	_	w		20	10	10	Ħ	
Diphtheria	N	ь Б			N	N		. !	,
Dysentery, amoebic	1	,				,	ı		
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Encephalitis, infectious	,			,_	,				
German measles	۲	1	ш	ı	4	_	_	F	
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Hookworm	1	1	1		,			1	
Influenza	F	62	N		5	12	29	27	
Malaria	ı	,	ı	ı	, :	ı			
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Meningitis, meningococcal	1	N		,	1	1	ı		,
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Ophthalmia neonatorum	•	1			,	ı			,
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Poliomyelitis, acute	27	-	4	4	٠,	٠	10	N	N
uerperal septicemia	1	1	•	ı		ı	,	1	
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locky Mountain spotted fever	1	,	1	ı	/ -	ı	1	,	ı
carlet fever	w		6		15	9	w	w	
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TABLE VI. REPORTED CASES OF COMMUNICABLE DISEASES BY COUNTY, OKLAHOMA, 1948 (Continued)

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Vincent's angina Wincent's angina Winceping cough	Undulant fever	Paratyphoid fever	Tularemia	Tuberculosis, respiratory	Trachom	Syphilis	Septio sore throat	Scarlet fever	Rables in man	Puerperal septicemia	Police little	Pneumonia, lobar	Pellagra	Ophthalmia neonatorum	Meningitis, meningococcal	Measles	Influenza Malaria	Hookworm	Conorrhea	Corman mossles	Dysentery, unspecified	Dysentery, amount	Dygentery smootic	Chickenpox	Anthrax in man	Disease	Whooping cough	Vincent's angina	Undulant fever	Typhus fever	Typhoid fever	Tularemia	Tuberculosis, respiratory	Trachoma	Syphilis	Smallpox	Scarlet fever	Rocky Mountain spotted fever	Puerperal septicemia	Poliomyelitis, acute	Pneumonia, lobar	Pressmonts bronchisl	Ophthelmia neonatorum	Meningitis, meningococcal	Measles	Influenza	Gonorrhea	German measles	Dysentery, unspecified	Dysentery, bacillary	Chickenpox Diphtheria
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