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## LEPROSY IN CALIFORNIA-DANGER OF INFECTION

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Reports on the prevalence of leprosy often do not disclose where the infection was acquired. This is important in connection with control measures if the case is found in an area in which transmission to the public is likely to occur. With new interest being taken in this disease by health authorities in the United States, it is desirable to know the danger of spread in different areas. This seemed especially important for California where many cases have been reported. Among 475 cases reported up to 1940, probably not more than 14 had been infected in the State (1). The present investigation was undertaken to obtain more comprehensive and more recent data. California stands almost alone among the States in being geographically situated for receiving infection from two general sources. The proximity to Mexico, which has many cases, has resulted in the entrance of a very considerable number of cases from that country. The State is the most convenient port of entry for Hawaii, Japan, and other Pacific islands, as well as China, which has resulted in the importation of a smaller but considerable number of cases. These undoubtedly included active cases and probably a larger number in the incubation stage.

At the time California became a part of the United States (1850), the natives, excluding Indians, were designated as Hispano-Californians (Mexicans) and constituted a large part of the population. A number of native Hawaiians came to the State soon after discovery of gold (1848), and at about the same time Chinese began to come in large numbers. Doubtlessly, both immigrations brought leprosy with them. The first readily available reference to the disease in California is a report by the jail physician of San Francisco in 1877, who mentioned treatment of 3 cases of "leprosis." A little later the State bealth officer of the day, Dr. H. S. Orme, in an annual report (2) included the following statistical data on lepers in San Francisco from 1871 to 1890, based on California State Board of Health reports from 1886 to 1894:

| Year of admission: | Cases | Year of admission: | Cases | Year of admission: | Cases |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1871 | 1 | 1878. | 13 | 1885 | 7 |
| 1872 | 1 | 1879 | 14 | 1886 | 6 |
| 1873 | 1 | 1880 | 10 | 1887 | 3 |
| 1874 | 6 | 1881 | 2 | 1888 | 3 |
| 1875 | 9 | 1882 | 12 | 1889 | 12 |
| 1876. | 3 | 1883. | 11 | 1890 | 5) |
| 1877 | 0 | 1884.-...-.-.-. | 9 | Total | ${ }^{1} 128$ |

${ }^{1}$ Of this total, 115 were Mongolians, 12 whites and 1 mixed; 120 were males and 8 females.
Birthplaces were recorded as follows:


These figures show an overwhelming predominance of Chinese and an extraordinary excess of males. Nearly everywhere the number of male victims is much larger than females, the ratio generally being about 2:1. The very great excess shown in California in those early years doubtlessly resulted from confining Chinese immigration largely to males. Dr. Orme also wrote "Long ago the people of California recognized the danger of planting leprosy on this coast through Chinese immigration, and for more than 15 years legislation gave abundant authority for its exclusion and repression. Section 2952 of the Political Code reads: 'It shall not be lawful for lepers or persons affected with leprosy, or elephantiasis, to live in ordinary intercourse with the population of this State; but all persons shall be compelled to inhabit such lazarettos, or leper's quarters, as may be assigned to them by the Board of Supervisors of the city or county in which they shall be domiciled or settled; and the Boards of Supervisors are vested with power and are required to make all necessary provisions for the separation, detention, and care of lepers or persons affected with leprosy, or elephantiasis, settled or domiciled in their respective cities or counties.'
"In 1883," Dr. Orme continued, "the Board of Supervisors of San Francisco supplemented the above act by an order which forbids positively the landing of lepers from any ship, their transfer to another vessel, and their harboring by any person outside the lazaretto." There is nothing to indicate that the cases referred to by Dr. Orme gave rise to any new infections.

It has long been known that California furnishes a large proportion of the cases of leprosy reported in the United States and, according to Hopkins and Faget (8), the State with 207 cases ranks third in the number of cases sent to the National Leprosarium at Carville, La., being exceeded only by Louisiana with 596 cases and Texas with 214 for the period 1921-44. Until this study, there seems to have been no special attempt to determine how many, if any, of the cases re-
ported for California were infected there. Comparatively recently, when most health authorities began the adoption of new and more intelligently directed policies in dealing with this disease, it became important to know where leprosy is communicated from the sick to the well, in addition to where it is found. Florida, Louisiana, and Texas have long been recognized as areas in which leprosy spreads enough to be a public health problem and in recent years there has been a tendency to group California with these States as an "endemic" area. With the object only of ascertaining the status of the State as an area in which this disease was transmitted, this study was made. When data on any case indicated that in all probability the infection had been acquired elsewhere than in California, no further attention was given to it. This course was adopted because there was no intention of making a complete study, but only of the cases that could reasonably be regarded as having been infected in this State.

When this investigation began in California in July 1947, the State Health Department was engaged in a general statistical study of leprosy in California which was to be prepared for publication. The data for that study were generously placed at my disposal and found of much value. The figures were for the period 1906-1947, and covered a total of approximately 500 cases reported in the State.

The tracing of source and place of infection in communicable diseases usually is carried out by ascertaining the place and the time of exposure, giving consideration to the incubation period. Perhaps the best illustration of this is to be found in tracing the source of venereal disease in a control program. Another example is smallpox. Look for the infecting smallpox patient among the victim's contacts 12 to 14 days previous to onset. If his contacts can be traced, the infecting patient should be found.

It is the widely accepted view that leprosy is usually acquired in the early years of life. Determining the source and the place of infection in leprosy is, therefore, often difficult and frequently impossible, chiefly for two reasons: First, the manifestations in the infecting patient may be obscure and the diagnosis in the new patient uncertain for long periods, even many years; secondly, the incubation period is long and varying and may average from 8 to 10 years. However, some authorities feel that it may be prolonged to 25 years or longer. In this study, if the patient had lived in Hawaii, or the Philippines, or a similar recognized area of high leprosy prevalence, this was regarded as the place where the disease probably was acquired. A few years' residence in either of these Pacific Island groups was considered sufficient to attribute the infection to that area. If the patient had been born in Mexico, and had spent the early years of life in that country, Mexico was considered the probable place of infection even if a longer period later in life had been spent in California.

The following procedures have been utilized in this study. Patients admitted from California to the National Leprosarium at Carville, La., and who remained there, were interviewed in May 1947. Among 74 such cases 7 could be assigned to California as the place of infection. The records of the California State Department of Health were studied in July and August 1947. They were so complete that not much difficulty was encountered in allocating cases to a place of probable infection. The State records included most of the patients who had been interviewed at Carville in May 1947.

In recent years, the attitude of California health authorities in general has been very enlightened and progressive with respect to the public health management of the disease. While patients regarded as possible (or probable) sources of infection have been sent to the National Leprosarium at Carville, La., very little compulsion has been employed. Patients judged not to be a menace to those about them often have been allowed to remain at home, in local hospitals, or under the care of local physicians. Patients of Mexican origin who preferred to return to their native land were permitted to and informal arrangements for receiving the deportees were even facilitated by the State or local authorities with Mexican authorities.

## CASE STUDIES

The family groups with leprosy (excluding marital) appeared to present the clearest evidence of infection within the State. Three of these are of special interest as the cases charged to the State never had been outside California:
(1) K family: A mother, born in Japan, came to the United States when 14 years old and developed leprosy 15 years later. At the time of diagnosis she was classified as an active case of leprosy. Her husband, also born in Japan and the father of her 6 sons, was rated as an old inactive case, but the evidence in his case is not conclusive. The sons who contracted the disease were their third, age 12, the fifth, age 9 , and the sixth, age 8.
(2) S family: The first case in this family was the father who died of leprosy in 1928 and never had been out of the State. Ten years later a son, age 17, was infected. He also had never been out of California.
(3) F family: The father in this family had military service in the Philippine Islands (1899-1900) and had developed leprosy after his return, dying in 1912. His two sons, one born in 1901 and the other in 1902, developed the disease, one at age 16 and the other at 17. Both had lived at home with the father until 18 months before his death. A daughter is said to have escaped infection.
4/Another familial case centers about Mrs. M. P., age 40, who was found to have advanced leprosy in 1932. She was born and probably infected in Mexico. She died of pneumonia apparently while hospitalized for leprosy. A short time later a daughter, I. P., age 6, who had never lived out of California, was discovered to have early leprosy.

## ADULT INFECTIONS

F Almost as clear examples of adult infection within the State are at least two patients who had lived only in California, except for limited periods in areas where the disease never has been known to be transmitted:
${ }^{1}$ A young adult male (G. P.) who had been out of California only for 3 years while serving as a sailor in Alaska and Alaskan waters; a woman (M. B.), age 48, whose only residence outside California was 7 years spent in Utah. Neither Alaska nor Utah is considered as a probable area of leprosy transmission.
c Marital infections.-In the three instances in which husband and wife were reported to have leprosy, the marital partner first to present evidence of the disease was regarded, perhaps somewhat arbitrarily, as the source of infection for the mate. In one family it was not possible to reach any reasonably clear conclusion on this point. In all of the marital infections, the evidence is not so convincing since both partners had been born outside California. If the view of infection of one from the other had not been adopted, it would have been necessary to assume the coincidence that both partners had been infected abroad. Three marital infections in so small a total is a much larger number than is to be expected and throws doubt on some, or all of them.

The K. family: both partners previously mentioned were born in Japan and spent their early years there. It was impossible to be certain that either one was infected in California, but the probability appears to point in that direction. The alternative is to consider that both were infected in Japan.
The S. family: Mrs. M. S. was born in Mexico and came to California at the age of 28 . Nine years after coming to the State she was found to have welladvanced leprosy of the lepromatous type. Her husband, S. S., age 49, was born in Mexico. He spent the first 5 years of his life in Mexico and the remaining 44 years in California. The disease appeared about 1 year before the diagnosis of the maculo-anesthetic form was made; that is, 43 years after coming to the United States.
The R. family: Mr. J. R., age 49, was born in Mexico. He came to California at the age of 31 and was reported as having leprosy 18 years later. The disease was classified as "mixed" of long duration. His wife Jo. R., age 41, was born in Mexico and had lived in California 14 years. Her case was recorded as "macular leprosy, early."

Certain data on the 23 cases important to the present inquiry are shown in the following tabulation:

Table 1.- Leprosy infection in Californians who never left the State, probably acquired in California

| $\begin{gathered} \text { Year } \\ \text { re- } \\ \text { ported } \end{gathered}$ | Initials | Sex | Location | Source of infection |
| :---: | :---: | :---: | :---: | :---: |
| 1919.... | T. $\mathrm{F}^{2}$ | Male | Stockton. | Father. |
| 1919.... | W. F ${ }^{\text {W }}$ | do. | W do | Do. |
| 1925-..- | H. S | do | Walnut Grove. | Unknown. |
| 1032. | I. P--4 | Female | Tulare County | Mother. |
| 1938-- | J. S. $\mathrm{K}^{2}$ | Male. | Walnut Grove | Mather. |
| 1941. | W. | -----do | --.-do-...... | Do. |
| 1941.. | K. K. | do | do | Do. |

Table 2.- C'Leprosy infection in persons never out of State except to areas where disease is not known to be communicated

| Year | Initials | Sex | Location | Birthplace | Residence | Number of years outside State |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1921.- | G. P. 1 | Male | San Leandro. | California | Ulaska. |  |

Table 3.-Cases where marital partner is probable source of infection

| $\begin{gathered} \text { Year } \\ \text { re- } \\ \text { ported } \end{gathered}$ | Initials | Sex | Location | Birthplace | Probable source of infection |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1929. | Y.K (1) | Female | Sacramento. | Japan | Husband. |
| 1939...- | S. S | Male... | Carlsbad .-.- | Mexico. | Wife. |
| 1941...- | J. R-W. | Female | Mount Shasta | --do.- |  |

Table 4.-Cases believed to indicate infection in the State

| Year | Initials | Sex | Location | Birthplace | Residence outside the State |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1926 | M. L | Female | Decoto ....... | (1) | (1) |
| 1930 | E. L | Male | Los Angeles | Calif-... |  |
| 1931 | J. S | .-.do | Los Angeles area. |  | Mexico, 1 day ( 7 years prior to onset). |
| 1935 | C. R | . do | Hanford...-.-.-- | do | None. |
| 1935 1939 | R. ${ }^{\text {A. }}$ |  | San Francisco ---------- | -.do | Pennsylvania, Oregon, Mon- |
| 1943 | A. S |  |  |  | tana, Vancouver 5 years. Mexico before age 9 . |
| 1945 | D. M | do | Oakland. | Spain | Spain first year of life. |
| 1946 | R. M | Female | Fresno-..-.---- | Arizona | Arizona first year of life. |
| 1947 | E. H. |  | Los Angeles area. | Ohio | Ohio for first 50 years. |

[^0]In comparing the incidence of intrastate infected cases with the total number that were reported for periods for which data are available, the figures are as follows:


The period 1937-1941 includes the three children in one family. One case of within-State infection was omitted from this table as it was reported in 1947.
The figures show a tendency of total reported cases to be falling in recent years. The largest number for any one year was 28 in 1921. Intrastate infections do not vary much for the period under consideration.

## CLASSIFICATIONS OF AREAS OF INFECTIVITY

The prevalence of leprosy in the United States by classifying areas is as follows:
(1) Highly endemic.-All or the great majority of cases being infected in the State-Louisiana and Florida.
(2) Markedly endemic.-A large proportion of the cases being infected in the State-Texas.
(3) Mildly endemic.-A very small proportion of all cases being infected in the State-Minnesota.
(4) Feebly endemic.-Only occasional cases occurred at long inter-vals-South Carolina.
In such a grouping California would fall in the class of mildly endemic along with Minnesota. Minnesota has had 7 cases of local origin among a total of 100 or more, while in California the figures are approximately 23 among about 500 -a rather suggestive similarity between the two States.
When the data are examined from the point of view of locality in the State where infection occurred, it is found that eight of the cases came from a comparatively small area near the middle of the State as follows:

Sacramento-4 cases in one family-mother, $\mathbf{3}$ children $A$ Walnut Grove- 2 cases in one family-father, 1 child Stockton-2 cases in one family- 2 brothers
These are from an area with a radius of about 30 miles. Of the 8 cases, 6 were children in families with a leprous parent.
The experience of California seems to agree to a considerable extent with that of Minnesota where the number of cases acquiring the
disease in the State was far outnumbered by imported cases. There is one important difference between the two States. In California, leprosy continues to be introduced with the importation of patients or persons in the incubation period from Mexico and the Pacific area, while in Minnesota, an end to the admission of new cases came about the beginning of the 20th century.

## SUMMARY

An investigation having a very limited objective, shows the following: That 23 persons in the present century have acquired leprosy in California. Of these, seven never had been out of the State. About these seven there can be no doubt as to the place of infection. The remainder are less positively attributed to infection in the State but this is believed to be established beyond reasonable doubt.

Tbe majority of all cases are due to infection in Mexico, China, and the Pacific Islands.

California is to be regarded as an area in which the likelihood of transmission of leprosy is small, except for children born of parents, one or both of whom have the disease.

## ACKNOWLEDGMENT

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## REFERENCES

(1) McCoy, G. W.: Observations on the epidemiology of leprosy, Pub. Health Rep. 57: 1935 (1942).
(2) Orme, H. S.: Report of State Board of Health of California June 30, 1888June 30, 1890, page 211.
(3) Hopkins, Ralph, and Faget, G. H.: Recent trends in leprosy in the United States, J. A. M. A. 126: 937 (1944).

## INCIDENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

## March 28-April 24, 1948

The accompanying table summarizes the incidence of nine important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State for each week are published in Public Health Reports under the section "Incidence of Disease." The table gives the number of cases of these diseases for the 4 weeks ended April 24, 1948, the number reported for the corresponding period in 1947, and the median number for the years 1943-47.

## DISEASES ABOVE MEDIAN INCIDENCE

Influenza.-The reported number of cases of influenza dropped from 25,459 during the preceding 4 weeks to 10,095 for the 4 weeks ended April 24. Of the total cases Texas reported 4,393, South Carolina 1,486, and Virginia 1,138-70 percent of the total cases occurred in those 3 States. The recent rise of this disease has been confined to States in the Southern and Western sections of the country. In the East South Central, Mountain and Pacific sections the incidence has dropped nearly to the level of the preceding 5 -year median, but in the South Atlantic and West South Central sections the numbers of cases are still relatively high. The incidence for the country as a whole was less than 10 percent of the 1947 figure for the same weeks, but it was about 17 percent above the 1943-47 median incidence. The peak of the recent outbreak was reached during the month of January while the peak of the 1947 epidemic was not reached until March, with very little drop in the number of cases during the month of April.

Poliomyelitis.-While the number of cases of poliomyelitis was not large, it represented an increase of more than 10 percent over the median for the preceding 5 years, and with the exception of the year 1945, when 128 cases were reported for these same 4 weeks, the current incidence was the highest for the corresponding weeks in the 20 years for which data are available in this form. Each section of the country except the North Atlantic, East South Central, and Pacific sections reported an excess of cases over the normal seasonal median. While an increase of this disease may be expected at this season of the year, in most preceding years the increase has not occurred until sometime during the month of May; the lowest incidence of the season has normally been reached during the 4 weeks corresponding to the period under consideration.

## DISEASES BELOW MEDIAN INCIDENCE

Diphtheria.-For the 4 weeks ended April 24 there were 610 cases of diphtheria reported. The median number for the preceding 5 years was 922 . For the country as a whole the current incidence was the lowest on record for this period. In the Mountain section the number of cases (75) was 50 percent above the seasonal expectancy, but in all other sections the incidence was relatively low.

Measles.-The number of reported cases of measles rose from 83,160 during the preceding 4 weeks to 102,680 during the current 4 -week period. The incidence was 3.6 times that reported for the corresponding period in 1947, but it was slightly below the median for the preceding 5 years ( 104,809 cases). Significant increases over the normal seasonal incidence were reported from the East North Central,

West South Central, Mountain, and Pacific sections. In other sections the incidence was about the same or below the preceding 5 -year medians.
Meningococcus meningitis.-The number of cases (285) of meningococcus meningitis was less than 75 percent of the number reported for the corresponding period in 1947 and about 36 percent of the median for the preceding 5 years. In the Mountain section the incidence was the same as the median but in all other sections the incidence was considerably below the 1943-47 median. For the country as a whole the current incidence was the lowest since 1941 when 225 cases were reported for these same weeks. The current incidence compares very favorably with the average number of cases (approximately 275) for non-epidemic years, the 1943-47 median contains 3 years of unusually high meningitis incidence.

Scarlet fever.-This disease continued on its downward trend, the number of cases $(8,312)$ reported for the 4 weeks ended April 24 being below the record low incidence of 1947 ( 9,898 cases). In each section of the country the current incidence was considerably below the normal seasonal incidence. This disease has been on a steady decline since 1944 and for this particular period the incidence was the lowest in the 20 years for which these data are available.

Smallpox.-Kansas and North Carolina each reported 2 cases of smallpox and Nebraska, Wyoming, and Arizona one each during the current 4 weeks. There were 38 cases reported during the corresponding period in 1947 and the median for the preceding 5 years was 54 cases. During this period in 1947 there was a slight outbreak of smallpox around New York City, the first outbreak in New York State since 1939, and 13 cases were also reported from Texas during these weeks. For the country as a whole the current incidence is the lowest on record for this period.

Typhoid and paratyphoid fever.-The number of cases of these diseases increased from 166 cases during the preceding 4 weeks to 225 during the current 4 -week period. The number of cases was 1.4 times the 1947 incidence for the same weeks and slightly below the median for the preceding 5 years. The greatest increases over the 1947 figures occurred in the South Atlantic and West South Central sections with minor increases in all other sections except the New England, Mountain, and Pacific sections. Compared with the preceding 5 -year median, the current incidence was higher than the median in the New England, West North Central, South Atlantic, and West South Central sections; in other sections the numbers of cases were about the same or below the medians.

Whooping cough.-For the 4 weeks ended April 24 there were 8,001 cases of whooping cough reported, as compared with 10,545 in 1947 and a median of 10,035 for the corresponding weeks in the preceding

5 years. In the West South Central section the number of cases $(2,172)$ was 1.9 times the seasonal expectancy and a few more cases than might normally be expected occurred in the West North Central and Mountain sections, but in all other sections the incidence was relatively low.

## MORTALITY, ALL CAUSES

For the 4 weeks ended April 24 there were 37,407 deaths from all causes reported to the National Office of Vital Statistics by 93 large cities. The median number for the years $1945-47$ was 36,731 deaths. During the first 2 weeks of the 4 -week period the number of deaths was considerably above the preceding 3 -year median, but during each of the last 2 weeks the number was lower than the median. For the entire 4-week period the increase over the median was about 1.8 percent.

Number of reported cases of 9 communicable diseases in the United States during the 4-week period March 28-April 24, 1948, the number for the corresponding period in 1947, and the median number of cases reported for the corresponding period, 1943-47

| Division | Current period | 1947 | 5-year median | Current period | 1947 | 5-year median | Current period | 1947 | 5-year median |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Diphtheria |  |  | Influenza ${ }^{1}$ |  |  | Measles |  |  |
| United States. <br> New England <br> Middle Atlantic <br> East North Central <br> West North Central <br> South Atlantic. <br> East South Central <br> West South Central <br> Mountain $\qquad$ | 610 | 922 | 922 | 10,095 | 120, 721 | 8,650 | 102,680 | 28,280 | 104, 809 |
|  | 21 | 47 | 32 |  | 1205 | 8,650 | 5,840 | 7,076 | 7,487 |
|  | 63 | 165 | 163 | 72 | 119 | 72 | 20, 492 | 4,328 | 20,955 |
|  | 86 | 118 | 166 | 80 | 3, 868 | 427 | 29,616 | 5,055 | 26,395 |
|  | 39 | 85 | 70 | 114 | 14,564 | 108 | 7,401 | 1,444 | 7,441 |
|  | 124 | 170 | 131 | 2, 878 | 36, 811 | 2, 486 | 5,349 | 4,369 | 7,035 |
|  | 54 | $\stackrel{88}{127}$ | 85 152 | 5.835 | 9,740 | 606 4.277 | 2,161 | 1,465 | ${ }_{5}^{3,182}$ |
|  | 75 | 127 | $\begin{array}{r}152 \\ 50 \\ \hline\end{array}$ | 5, 664 | 48,582 | 4,609 | 11,332 5,269 | 1,401 | 4,643 |
|  | 58 | 73 | 125 | 366 | 1,866 | 344 | 15, 220 | 1,072 | 7,945 |
|  | Meningococcus meningitis |  |  | Poliomyelitis |  |  | Scarlet fever |  |  |
| United States <br> New England <br> Middle Atlantic. <br> East North Central <br> West North Central <br> South Atlantic. <br> East South Central <br> West South Central <br> Mountain. <br> Pacific. | 285 | 383 | 794 | 126 | 112 | 111 | 8, 312 | 9,898 | 17,096 |
|  | 10 | 12 | 39 | 0 | 2 | 2 | 916 | 899 | 2,211 |
|  | 52 | 57 | 155 | 16 | 20 | 19 | 2, 374 | 2,769 | 5,679 |
|  | 61 | 85 | 152 | 19 | 13 | 10 | 2,645 | 2,971 | 4, 247 |
|  | 21 | 37 | 72 | 19 | 9 | 5 | 595 | 824 | 1,552 |
|  | 48 | 68 | 122 | 16 | 9 | 9 | 463 | 645 | 1, 340 |
|  | 37 | 38 | 68 | 6 | 9 | 9 |  | 419 | 475 |
|  | 25 | 45 | 73 | 31 | 18 | 20 | 197 | 195 | 492 |
|  | 10 | 6 | 10 | 5 | 1 | 3 | 287 | 395 | 855 |
|  | 21 | 35 | 103 | 14 | 31 | 21 | 648 | 781 | 1,061 |
|  |  | allpox |  |  | phoid an yphoid f | $\begin{aligned} & \text { dever } \\ & \text { nen } \end{aligned}$ | Whoo | ping co |  |
| United States | 7 | 38 | 54 | 225 | 161 | 241 | 8,001 | 10,545 | 10,035 |
| New England | 0 | 0 | 0 | 24 | 24 | 9 | ${ }^{8} 532$ | 10,524 | -932 |
| Middle Atlantic . | 0 | 13 | 0 | 16 | 15 | 37 | 915 | 1,738 | 1,738 |
| East North Central. |  | 3 | 7 | 24 | 18 | 27 | 1,199 | 2, 110 | 1,476 |
| West North Central. |  | 2 | 8 | 15 | 13 | 10 | 516 | 318 | 318 |
| South Atlantic... | 2 | 0 | 2 | 58 | 26 | 52 | 1,084 | 1,363 | 1,533 |
| East South Central.....- | 0 | 5 | 4 | 22 | 16 | 23 | 326 | 588 | 463 |
| West South Central...-- | 0 | 15 | 8 | 48 | 25 | 40 | 2,172 | 2,313 | 1,160 |
| Mountain.-...-...- | 2 | 0 | 2 | 1 | 4 | 15 | 659 | 324 | 474 |
| Pacific.- | 0 | 0 | 6 | 17 | 20 | 20 | 598 | 967 | 967 |

[^1]
## PUBLIC HEALTH SERVICE PUBLICATIONS

## List of Publications Issued During July-December 1947

The purpose of this list is to provide a complete and continuing record of Public Health Service publications for reference use by librarians, scientific workers, and others interested in particular fields of public health work, and not to offer the publications for indiscriminate free distribution.

Single"sample copies are available from the Public Inquiries Section, Office of Health Information, Public Health Service, Washington 25, D. C.

Quantities may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at prices shown, with a reduction of 25 percent on lots of 100 copies or more of a single publication.

The publications marked with an asterisk (*) may be obtained only by purchase.

## Periodicals

*Public Health Reports (weekly), July-December, vol. 62, Nos. 27 to 52. Pages 969 to 1812. 10 cents a number. Subscription price $\$ 4$ a year.
Extracts from Public Health Reports (monthly), July-December, Tuberculosis Control Issues Nos. 17 to 22. 30 pages each. 10 cents a number. Subscription price $\$ 1$ a year.
*The Journal of Venereal Disease Information (monthly), July-December, vol. 28, Nos. 7 to 12. Pages 129 to 298. 10 cents a number. Subscription price 75 cents a year.
*Journal of the National Cancer Institute (bimonthly), August-December, vol. 8, Nos. 1 to 3. Pages 1 to 159. 40 cents a number. Subscription price $\$ 2$ a year.
Public Health Engineering Abstracts (monthly), July-December, vol. XXVII, Nos. 7 to 12 . 32 pages each. No sales stock.
Industrial Hygiene Newsletter (monthly), July-December, vol. 7, Nos. 7 to 12. 16 pages each. 10 cents a number. Subscription price $\$ 1$ a year.
National Negro Health News (quarterly), July-December, vol. 15, Nos. 3 and 4. 24 pages each. No sales stock.

## Reprints from the Public Health Reports

2795. "Albumin-bacterioplasma conjugates" with special reference to the etiology of rheumatic fever. By Mark P. Schultz and Edythe J. Rose. July 11, 1947. 14 pages. 5 cents.
2796. Public Health Service publications. A list of publications issued during the period July-December 1946. July 11, 1947. 5 pages. 5 cents.
2797. Comparison of the spirocheticidal activity of arsphenamines and phenarsines (Arsenoxides) in experimental syphilis. By T. F. Probey. July 18, 1947. 8 pages. 10 cents.
2798. Toxic effects of tetranitromethane, a contaminant in crude TNT. By Rudolph F. Sievers, Edward Rushing, Helen Gay, and A. R. Monaco. July 18, 1947. 13 pages. 5 cents.
2799. Nutrition studies. I. Description of physical signs possibly related to nutritional status. By Harold R. Sandstead and Richmond K. Anderson. July 25, 1947. 13 pages. 5 cents.
2800. Mental hygiene in public health. By Paul V. Lemkau. August 8, 1947. 12 pages. 5 cents.
2801. Preliminary report on some organic materials as tick repellents and toxic agents. By James M. Brennan. August 8, 1947. 4 pages. 5 cents.
2802. State planning for participation in the National Mental Health Act. By R. H. Felix. August 15, 1947. 9 pages. 5 cents.
2803. DDT in oil as a mosquito larvicide. By Henry A. Johnson and Willis L. Goodman. August 15,1947 . 10 pages. 5 cents.
2804. Loss of virulence of Treponema pallidum during processing of dried blood serum. By T. F. Probey. August 15, 1947. 4 pages. 5 cents.
2805. Control of rabies. Report by the Committee on Public Health Relations of the New York Academy of Medicine. August 22, 1947. 24 pages. 10 cents.
2806. The family and dental disease. By Henry Klein. August 29, 1947. 8 pages. 5 cents.
2807. Effects of DDT mosquito larviciding on wildlife. Part II. Effects of routine airplane larviciding on bird and mammal populations. By Arnold B. Erickson. August 29, 1947. 11 pages. 5 cents.
2808. Dental services received by children in a New York clinic. By lsidore Altman. September 19, 1947. 18 pages. 10 cents.
2809. Studies on the air transmission of micro-organisms derived from the respiratory tract. By H. du Buy, F. A. Arnold, and B. J. Olson. September 26,1947 . 24 pages. 10 cents.
2810. A case of Q fever probably contracted by exposure to ticks in nature. By Carl M. Eklund, R. R. Parker, and David B. Lackman. September 26, 1947. 4 pages. 5 cents.
2811. Isolation of poliomyelitis virus from human serum by direct inoculation into a laboratory mouse. By Hilary Koprowski, Thomas W. Norton and Walsh McDermott. October 10, 1947. 10 pages. 5 cents.
2812. The effect of topically applied fluorides on dental caries experience. By Donald J. Galagan and John W. Knutson. October 10, 1947. 8 pages. 5 cents.
2813. Recovery of ornithosis virus from pigeons in Baltimore, Md. By Dorland J. Davis and C. Leroy Ewing. October 10, 1947. 5 pages. 5 cents.
2814. The effect of morphine addiction on blood, plasma, and "extra-cellular" fluid volumes in man. By Harris Isbell. October 17, 1947. 16 pages. 5 cents.
2815. Electron microscopy of tooth structure by the shadowed collodion replica method. By David B. Scott and Ralph W. G. Wyckoff. October 17, 1947. 8 pages; 8 illustrations. 10 cents.
2816. Statistical activities in State health departments. By Daniel D. Swinney. October 24, 1947. 12 pages. 5 cents.
2817. Sickness absenteeism among male and female industrial workers 1937-46, inclusive. By W. M. Gafafer. October 24, 1947. 4 pages. 5 cents.
2818. Vertebral body trephine. A preliminary report. By A. A. Michele and F. J. Krueger. August 8, 1947. 4 pages; 1 illustration. 5 cents.
2819. Births, infant mortality and maternal mortality in the United States1944. By Nancy J. Brombacher. October 31, 1947. 20 pages. 10 cents.
2820. The role of health education in a public health program. By Mayhew Derryberry. November 14, 1947. 13 pages. 10 cents.
$2 \times 21$. Naturally occurring histoplasmosis in Mus muscuius and Rattus norvegicus. By Chester W. Emmons, Joseph A. Bell, and Byron J. Olson. November 14, 1947. 5 pages. 5 cents.
2821. Opportunities for public health in disability insurance programs. $\mathrm{B}_{\mathrm{y}}$ Milton I. Roemer. November 21, 1947. 12 pages. 5 cents.
2822. Relationship between per capita income and mortality, in the cities of 100,000 or more population. By Marion E. Altenderfer. November 28,1947 . 12 pages. 5 cents.
2823. Contributions of the UNRRA sanitary engineering program to international health. By Frederick F. Aldridge. December 12, 1947. 12 pages. 5 cents.
2824. A report on the histopathology of the cutaneous lesions of a case of rickettsialpox. By Lloyd R. Hershberger and Robert J. Huebner. December 12, 1947. 5 pages; 3 illustrations. 5 cents.
2825. Dental caries prevalence and tooth mortality. A study of 24,092 Georgia children in 12 communities. By Thomas L. Hagan. December 19, 1947. 16 pages. 10 cents.
2826. Pteroylglutamic acid ("folic acid"), liver extract, and amino acids in the treatment of granulocytopenia in rats. By Floyd S. Daft. December 26,1947 . 8 pages. 5 cents.
2827. A serum protection test in tularemic infections in white rats. By Carl L. Larson. December 26, 1947. 8 pages. 5 cents.

## Supplements to Public Health Reports

196. An evaluation of neurologic symptoms and findings occurring among TNT workers. By Rudolph F. Sievers. 1947. 26 pages. 20 cents.
197. Thallium. A review and summary of medical literature. By Francis F. Heyroth. 1947. 23 pages. 10 cents.
198. The incidence of rheumatic fever as recorded in general morbidity surveys of families. By Selwyn D. Coilins. 1947. 59 pages. 15 cents.
199. Food handlers' schools in Hawaii. By B. J. McMorrow and F. A. Schramm. 1947. 37 pages. 17 illustrations. 15 cents.
200. Relation of plants to malaria control in Puerto Rico. By Harry D. Pratt. 1947. 39 pages; 10 illustrations. 10 cents.
201. Laboratory control of water supplies. By H. W. Streeter. 1947. 15 pages. 10 cents.
202. Problems of interpretation of the data of rodent-ectoparasite surveys and studies of rodent ectoparasites in Honolulu, T. H., Savannah, Ga., and Dothan, Ala. By LaMont C. Cole and Jean A. Koepke. 1947. 71 pages. 20 cents.
203. The toxicity and potential dangers of zinc phosphide and of hydrogen phosphide (phosphine). (A review of the nonsecret, nonconfidential and nonrestricted literature.) By W. F. von Oettingen. 1947. 17 pages. 10 cents.
204. Directory of State and Territorial health authorities, 1947. (1947 revision.) 51 pages. 15 cents.

## Public Health Bulletins

296. Manual of recommended water-sanitation practice recommended by the United States Public Health Service 1946. 1947. 40 pages. 15 cents.
297. A review of the literature relating to affections of the respiratory tract in individuals exposed to cotton dust. By B. H. Caminita, William F. Baum, Paul A. Neal, and R. Schneiter. 1947. 86 pages. 25 cents.
298. Health of arc welders in steel ship construction. A survey made in cooperation with United States Maritime Commission and United States Navy. By Waldemar C. Dreessen, Hugh P. Brinton, Robert G. Keenan, Thalbert R. Thomas, Edwin H. Place, and James E. Fuller. 1947. 200 pages; 16 illustrations. 55 cents.

## National Institute of Health Bulletin

189. Studies on schistosomiasis. By Willard H. Wright, Eloise B. Cram, Elmer G. Berry, Paul A. Ward, Dorothy Travis, Ruth E. Rue, Virginia S. Files, Myrna F. Jones, William B. Figgat, Frederick J. Brady, Walter L. Newton, S. R. Weibel, Harold B. Warren, Mary Louise Steinle, Mirriel S. Hummel, M. O. Nolan, Elizabeth Rogers Mann, Helen M. Churchill, John Bozicevich and Helen M. Hoyem. 1947. 212 pages. 50 cents.

## Miscellaneous Publication

36. Better health for your community. Revised 1947. 12 pages. 5 cents.

## Health Education Series

15. Menopause. 1947. 3 pages. 5 cents; $\$ 1$ per 100.
16. Rocky Mountain spotted fever. 1947. 4 pages. 5 cents; $\$ 1$ per 100.
17. Measles. 1947. 4 pages. 5 cents; $\$ 1$ per 100.
18. Smallpox. 1947. 2 pages. 5 cents; $\$ 1$ per 100.
19. Bronchial pneumonia. 1947. 2 pages. 5 cents; 75 cents per 100.

## Community Health Series

From hand to mouth, No. 3. Revised 1947. 48 pages. 15 cents.

## Unnumbered Publications

Index to Public Health Reports, vol. 62. Part 1, January-June 1947. 15 pages. 5 cents.
The physician in the U. S. Public Health Service. 1947. 20 pages, illustrated. 15 cents.
Free medical care for merchant seamen. 1947. 4 pages, illustrated. 5 cents. Compilation of Public Health Service Regulations. Reprinted from Federal

Register. September 16, 1947. 74 pages. (For official use only.)
Compilation of Public Health Service Regulations. Supplements Nos. 1-5, September 17 through October 11, 1947. 6 pages. (For official use only.)
Compilation of Public Health Service Regulations. Supplement No. 6, October 22, 1947. 27 pages. (For official use only.)
Compilation of Public Health Service Regulations. Supplements Nos. 7-10, October 24 through November 22, 1947. 2 pages. (For official use only.)

## Reprints from the Journal of the National Cancer Institute

59. Inhibition of cathepsins of normal calf spleen and thymus. By Mary E. Maver and Antoinette Greco. October 1947. 4 pages. No sales stock.
60. Subcutaneous sarcomas in mice implanted with hydrocarbon-cholesterol pellets. By Michael B. Shimkin and Rose S. Wyman. October 1947. 4 pages. No sales stock.
61. Vascular reactions of normal and malignant tissues in vivo. II. The vascular reactions of the normal and neoplastic tissues of mice to a bacterial polysaccharide from Serratia marcescens (Bacillus prodigiosus) culture filtrates. By Glenn H. Algire, Frances Y. Legallais and Helen D. Park. October 1947. 10 pages; 4 illustrations. No sales stock.
62. Pulmonary-tumor induction by transplacental exposure to urethane. By C. D. Larsen. October 1947. 8 pages. No sales stock.
63. Enzymatic hydrolysis of homologous amino acid amides in normal and neoplastic tissues. By Maurice Errera and Jesse P. Greenstein. October 1947. 5 pages. No sales stock.
64. Note on benzoylarginineamidase activity in extracts of rat liver and hepatoma. By Jesse P. Greenstein and Florence M. Leuthardt. October 1947. 2 pages. No sales stock.
65. Effects of methylcholanthrene in pregnant mice. By L. C. Strong and W. F. Hollander. October 1947. 4 pages. No sales stock.
66. Procedure for the fixation, staining, and mounting of whole mounts from tissue cultures grown in Carrel D 3.5 flasks. By Wilton R. Earle. October 1947. 7 pages. No sales stock.

## Reprints from The Journal of Venereal Disease Information

284. Some significant aspects of venereal-disease research. By J. F. Mahoney. July 1947. 4 pages. 5 cents.
285. The quantitative Kahn test. By Ad Harris. July 1947. 4 pages. 5 cents,
286. A revised note on quantitative Kahn tests employing 0.9 and 2.5 percent salt-solution systems. By Reuben L. Kahn. July 1947. 2 pages. 5 cents.
287. Preservation of sheep red cells for complement-fixation tests. I. An improved method. By J. Portnoy, H. N. Bossak, and Ad Harris. July 1947. 4 pages. 5 cents.
288. Treatment of the syphilitic pregnant woman with penicillin in oil-beeswax: A comparison with results obtained using aqueous sodium penicillin. By Norman R. Ingraham, Elizabeth Kirk Rose, Herman Beerman, Virgene S. Wammock, John H. Stokes, and Paul Gyorgy. August 1947. 8 pages. 5 cents.
289. Socioeconomic aspects of granuloma inguinale. By Robert B. Greenblatt. Granuloma inguinale: Streptomycin therapy and research. By Robert B. Greenblatt, Robert B. Dienst, Herbert S. Kupperman, and Cecil R. Reinstein. September 1947. 8 pages. 5 cents.
290. Notes on the epidemiology of granuloma inguinale. By Charles Walter Clarke. September 1947. 6 pages. 5 cents.
291. "Penicillin-resistant gonorrhea" vs. "nonspecific urethritis." By Gcorge E. Parkhurst, Fred W. Harb, and George R. Cannefax. October 1947. 4 pages. 5 cents.
292. A study of preinoculation and preincubation factors in the primary isolation of Neisseria gonorrhoeae. By J. H. Schubert, Matthew A. Bucca, and J. D. Thayer. October 1947. 4 pages. 5 cents.
293. Two reports' on out-patient attendance for treatment of syphilis, using penicillin in oil-beeswax. I. A study of clinic attendance. By Cherles R. Hayman. II. Attendance record of patients treated by private physicians. By R. B. Aiken. October 1947. 4 pages. 5 cents.
294. A comparison of the efficiency of three common methods of transportation of gonorrheal specimens. By Lenore R. Peizer and Gustav I. Steffen. October 1947. 4 pages. 5 cents.
295. Penicillin therapy in early syphilis: III. By R. C. Arnold, J. F. Mahoney, John C. Cutler, and Sacha Levitan. November 1947. 4 pages. 5 cents.
296. Venereal disease control during the postwar period. By J. R. Heller, Jr. November 1947. 5 pages. 5 cents.
297. Quantitative serologic tests for syphilis. I. A standard method of reporting. By Ad Harris. November 1947. 3 pages. 5 cents.
298. Attempted immunization of rabbits against syphilis with killed Treponema pallidum and adjuvants. By Harold J. Magnuson, Seymour P. Halbert, and Barbara J. Rosenau. December 1947. 5 pages. 5 cents.
299. Contribution of the nurse in the schools to venereal-disease control. By Jane Barbara Taylor and Mildred F. Wills. December 1947. 5 pages. 5 cents.
300. Syphilis morbidity reporting by private physicians in the State of Florida. By R. F. Sondag and A. J. Sweeney. December 1947. 4 pages. 5 cents.

## Supplement to the Journal of Venereal Disease Information

21. Autopsy studies in syphilis. A monograph. By Paul D. Rosahn. 1947. 67 pages. 25 cents.

## Venereal Disease Bulletin

99. Venereal-disease control. A brief presentation of the venereal-disease control plan practiced in the United States of America. March 1947. 10 pages. 5 cents.

## National Office of Vital Statistics Publications

Current mortality analysis (monthly), vol. 5, Nos. 5-9, 1947.
A list of current publications of the National Office of Vital Statistics, August 1947, 6 pages.
Monthly marriage report (marriage licenses issued in major cities), new series: vol. 1, Nos. 6-11, 1947.
Monthly vital statistics bulletin, vol. 9, Nos. 5-10, 1947.
Quarterly marriage report (marriage licenses issued in the United States by State, 1947), vol. 2, Nos. 1-3.
Vital statistics-Special reports, vol. 25, national summaries:
No. 18. Plural birth statistics United States and each State, 1944. 337 to 362 pages.
No. 19. Index to volume 25. 363 to 370 pages.
Vital statistics-Special reports, vol. 27, national summaries:
No. 3. Deaths and death rates for selected causes: United States, each division and State, 1945. 27 to 46 pages.
No. 4. Infant mortality by race and by urban and rural areas: United States, each division and State, 1945. 47 to 54 pages.
No. 5. Births and deaths by specified race: United States, each division and State, 1945. 55 to 58 pages.
No. 6. Annual summary of motor-vehicle accident fatalities, 1945. 59 to 130 pages.
No. 7. Maternal mortality by cause and by race: United States and each State, 1945. 131 to 146 pages.
No. 8. Births and deaths by urban and rural areas: United States, each division and State, 1945. 147 to 152 pages.
No. 9. Births by person in attendance, by race and by urban and rural areas: United States, each division and State, 1945. 153 to 162 pages.
No. 10. Marriage and divorce statistics: United States, 1946. 163 to 176 pages.
No. 11. Deaths and death rates for selected causes, by age, race, and sex: United States, 1945. 177 to 214 pages.
No. 12. Infant mortality from selected causes, by age, race, and sex: United States, 1945. 215 to 232 pages.
Vital Statistics-Special reports, vol. 23, selected studies:
No. 16. Is family size increasing? 317 to 326 pages.
No. 17. Seasonal variation in the crude birth rate. 327 to 336 pages.
Vital statistics-Special reports, vol. 26, State summaries:
Nos. 16-54. Summary of vital statistics, 1945, for each State, Kansas through Wyoming (issued in alphabetic order); and the possessions of the United States: Alaska, Hawaii, Puerto Rico, and the Virgin Islands. 201 to 674 pages.
Weekly Mortality Index, vol. 18, Nos. 26-51.
Where to write concerning marriage and divorce records. August 1947. 4 pages. Summary of international vital statistics, 1937-1944 (1947). 299 pages. \$1.25.
Uniform definitions of motor vehicle accidents, 1947. 17 pages.

# INCIDENCE OE DISEASE 

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

## UNITED STATES

## REPORTS FROM STATES FOR WEEK ENDED MAY 8, 1948

 SummaryA total of 107 cases of poliomyelitis was reported for the current week, as compared with 56 last week and a 5 -year (1943-47) median of 26 , reported for the corresponding week last year. Of the current total, Texas reported 55 (last week 25), California 14 (last week 3), North Carolina 8 (last week 7), and Indiana and Iowa 4 each. The total for the 7 -week period since the average date of seasonal low incidence is 321 , as compared with a 5 -year median of 196 (reported last year), 126 in 1944 (the lowest number reported for a corresponding period of the past 5 years) and 219 in 1945 (the highest).

The incidence of measles continued above the 5 -year median. A total of 28,343 cases was reported, as compared with 28,426 last week and a 5 -year median of 26,032 . Of the current total, 14,279 cases, or 50 percent occurred in the Middle Atlantic and East North Central areas (last year 3,037, or 37 percent of the 8,228 cases reported for the week). The total for the year to date is 334,940 , as compared with 107,221 for the same period last year and a 5 -year median of 340,866 .
Of the total of 9 cases of Rocky Mountain spotted fever (last week 2, 5 -year median 6), Maryland reported 3, Wyoming 2, and North Carolina, Oklahoma, Colorado, and Oregon, 1 each. The total to date is 22 (the same as the 5 -year median), as compared with 21 for the same period last year.

One case of smallpox was reported, in Louisiana, and 1 case of anthrax, in Pennsylvania. Of the 7 cases of leprosy reported, 5 were in Florida and 1 each in New York and California. One case of psittacosis was reported in California.

A total of 9,266 deaths from all causes was recorded during the week in 93 large cities in the United States, as compared with 9,041 last week, 9,190 and 9,144 , respectively, for the corresponding weeks of 1947 and 1946, and a 3 -year (1945-47) median of 9,147 . The total for the year to date is 188,841 , as compared with 189,114 for the corresponding period last year. Infant deaths totaled 655, as compared with 679 last week, 769 and 619, respectively, for the corresponding week of 1947 and 1946, and a 3 -year median of 619 . The cumulative figure is 13,072 , as compared with 15,064 for the corresponding period last year.

Telegraphic morbidity reports from State health officers for the week ended May 8, 1948, and comparison with corresponding week of 1947 and 5-year median
In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

${ }_{3}^{1}$ New York City only ${ }^{2}$ Philadelphia only.
${ }^{3}$ Period ended earlier than Saturday.
${ }^{4}$ Dates between which the approximate low week ends. The specific date will vary from year to year.
*Correction (deducted from cumulative total): Diphtheria, South Carolina, week ended Apr. 24, 7 cases (instead of 13).

Telegraphic morbidity reports from State health officers for the week ended May 8, 1948, and comparison with corresponding week of 1947 and 5-year median-Con.


[^2]Telegraphic morbidity reports from State health officers for the week ended May 8, 1948, and comparison with corresponding week of 1947 and 5-year median-Con.

${ }^{3}$ Period ended earlier than Saturday. $\quad 7$ 3-year median 1945-47.
Anthrax: Pennsylvania 1 case. Leprosy: New York 1, Florida 5, California 1. Psittacosis: California 1 case.
Alaska, weekended May 1: Influenza 2, pneumonia 2, whooping cough 19; week ended May 8, influenza 4, pneumonia 4, whooping cough 18.
Territory of Hawaii, week ended May 8: Rabies 0, leprosy 1, measles 1, scarlet fever 1, whooping cough 14.

## WEEKLY REPORTS FROM CITIES *

City reports for week ended May 1, 1948
This table lists the reports from 87 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

| Division, State, and city |  |  | $$ |  |  |  |  | Poliomyelitis cases | $\begin{aligned} & \text { Scarlet fever } \\ & \text { cases } \end{aligned}$ |  |  | \|cis |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NEW ENGLAND |  |  |  |  |  |  |  |  |  |  |  |  |
| Maine: |  |  |  |  |  |  |  |  |  |  |  |  |
| Portland. | 0 | 0 |  | 0 |  | 0 | 3 | 0 | 0 | 0 | 0 | 7 |
| New Hampshire: | 0 | 0 |  | 0 |  | 0 | 1 | 0 | 0 | 0 | 0 |  |
| Vermont: | 0 | 0 |  | 0 |  | 0 | 1 | 0 | 0 | 0 | 0 | --.... |
| Vermont: | 0 | 0 |  | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Massachusetts: |  |  |  |  |  |  |  |  |  |  |  |  |
| Boston. | 1 | 0 |  | 0 | 384 | 0 | 5 | 0 | 69 | 0 | 1 | ; |
| Fall River | 0 | 0 |  | 0 | 25 | 0 | 0 | 0 | 2 | 0 | 0 |  |
| Springfield | 0 | 0 |  | 0 | 3 | 0 | 2 | 0 | 1 | 0 | 0 |  |
| Worcester. | 0 | 0 |  | 0 | 27 | 0 | 2 | 0 | 5 | 0 | 0 | 4 |
| Rhode Island: <br> Providence | 0 | 0 | 2 | 0 | 4 | 0 | 3 | 0 | 3 | 0 | 1 | $1:$ |
| Connecticut: |  |  |  |  |  |  |  |  |  |  |  |  |
| Hartford. | 0 | 0 |  | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 |  |
| New Haven. | 0 | 0 | 1 | 0 | 4 | 0 | 1 | 0 | 3 | 0 | 0 | 4 |
| MiddLe ATLANTIC |  |  |  |  |  |  |  |  |  |  |  |  |
| New York: |  |  |  |  |  |  |  |  |  |  |  |  |
| Buffalo. | 0 | 0 |  | 0 | 28 | 0 | 7 | 0 | 11 | 0 | 0 | 5 |
| New York | 6 | 2 | 1 | 1 | 1,586 | 2 | 68 | 1 | 82 | 0 | 2 | 29 |
| Rochester. | 0 | 0 |  | 0 | - 2 | 0 | 1 | 0 | 2 | 0 | 1 |  |
| Syracuse. | 0 | 0 |  | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 10 |
| New Jersey: |  |  |  |  |  |  |  |  |  |  |  |  |
| Camden. | 0 | 0 |  | 0 | 27 | 0 | 2 | 0 | 1 | 0 | 0 |  |
| Newark. | 0 | 0 | 2 | 0 | 263 | 0 | 1 | 0 | 9 | 0 | 0 | 4 |
| Trenton. | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 7 | 0 | 0 |  |
| Pennsylvania: |  |  |  |  |  |  |  |  |  |  |  |  |
| Philadelphia | 2 | 0 | 1 | 1 | 873 | 3 3 | 10 | 0 | 43 70 | 0 | 0 | 3 |
| Pittsburgh | 0 | 0 |  | 0 | 3 | 0 | 2 | 0 | 15 | 0 | 0 | 1 |
| EAST NORTH CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |
| Ohio: |  |  |  |  |  |  |  |  |  |  |  |  |
| Cincinnati | 1 | 0 |  | 0 | 111 | 1 | 14 | 0 | 12 | 0 | 2 | 2 |
| Cleveland | 1 | 0 |  | 1 | 21 | 0 | 4 | 0 | 38 | 0 | 1 | 7 |
| Columbus. | 0 | 0 |  | 0 | 35 | 1 | 2 | 0 | 4 | 0 | 0 | 2 |
| Indiana: |  |  |  |  |  |  |  |  |  |  |  |  |
| Fort Wayne.-.-.-.-. | 0 | 0 |  | 0 | 14 | 0 | 0 | 0 | 1 | 0 | 0 |  |
| Indianapolis.-----.-- | 0 | 0 |  | 0 | 164 | 1 | 9 | 0 | 11 | 0 | 0 | 5 |
| South Bend. | 0 | 0 |  | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 |  |
| Terre Haute......-.-- | 0 | 0 |  | 0 | --- | 0 | 2 | 0 | 1 | 0 | 0 |  |
| Illinois: |  |  |  |  |  |  |  |  |  |  |  |  |
| Chicago | 1 | 0 |  | 2 | 690 3 | 1 | 25 | 0 | 37 4 | 0 | 2 | 13 |
| Springfield - ---------- Michigan: | 0 | 0 |  | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 0 | $\cdots$ |
| Detroit | 1 | 1 | 1 | 0 | 519 | 1 | 6 | 0 | 67 | 0 | 0 | 16 |
| Flint. | 0 | 0 |  | 0 |  | 1 | 1 | 0 | 5 | 0 | 0 |  |
| Grand Rapids | 0 | 0 |  | 0 | 13 | 0 | 0 | 0 | 3 | 0 | 0 | 5 |
| Wisconsin: |  |  |  |  |  |  |  |  |  |  |  |  |
| Kenosha.-.-.----.-.-- | 0 | 0 |  | 0 | 84 | 0 | 0 | 0 | 1 | 0 | 0 |  |
| Milwaukee. | 0 | 0 |  | 0 | 111 | 0 | 3 | 0 | 24 | 0 | 0 | 3 |
| Racine.-- | 0 | 0 |  | 0 | 53 | 0 | 0 | 0 | 3 | 0 | 0 | 5 |
| Superior.-----.-.-.-.-- | 0 | 0 |  | 0 | 227 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WEST NORTH CENTRAL |  |  |  |  |  |  |  |  |  |  |  |  |
| Minnesota: |  |  |  |  |  |  |  |  |  |  |  |  |
| Duluth | 0 | 0 |  | 0 | 284 | 0 | 1 | 0 | 1 | 0 | 0 |  |
| Minneapolis | 1 | 0 |  | 0 | 49 | 0 | 5 | 0 | 9 | 0 | 0 | 1 |
| St. Paul.--- | 0 | 0 |  | 0 | 61 | 2 | 3 | 0 | 4 | 0 | 0 | 10 |
| Missouri: |  |  |  |  |  |  |  |  |  |  |  |  |
| Kansas City .-.----.-- | 0 |  | 6 | 0 | 39 6 | 0 | 1 | 0 |  | 0 | 0 | 4 |
|  | 0 | 0 |  | 0 <br> 0 | 6 203 | 1 | 0 | 0 | 0 | 0 | 0 | 5 6 |

[^3]City reports for week ended May 1, 1948—Continued


City reports for week ended May 1, 1948-Continued

| Division, State, and city |  | $\begin{gathered} \text { Encephalitis, in- } \\ \text { fectious, cases } \end{gathered}$ | Influenza |  |  |  |  | Poliomyelitiscases | Scarlet fevercases |  |  | $\underset{\text { cases }}{\text { Whooping cough }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \text { O్O } \\ & \text { O} \\ & 0 \end{aligned}$ |  |  |  |  |  |  |  |  |  |
| PACIFIC |  |  |  |  |  |  |  |  |  |  |  |  |
| Washington: |  |  |  |  |  |  |  |  |  |  |  |  |
| Seattle..- | 0 | 0 |  | 0 | 180 | 2 | 1 | 0 | 10 | 0 | 0 | 2 |
| Spokane...---------- | 0 | 0 |  | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| Tacoma........-.-.-.-- | 0 | 0 |  | 0 | 25 | 0 | 0 | 0 | 2 | 0 | 0 |  |
| California: |  |  |  |  |  |  |  |  |  |  |  |  |
| Los Angeles. | 1 | 0 | 3 | 0 | 331 | 0 | 7 | 2 | 19 | 0 | 2 | 12 |
| Sacramento. | 1 | 0 |  | 0 | 14 | 0 | 0 | 0 | 4 | 0 | 0 | 7 |
| San Francisco. | 4 | 0 |  | 0 | 221 | 1 | 8 | 0 | 10 | 0 | 0 |  |
| Total | 34 | 3 | 41 | 6 | 8,089 | 28 | 307 | 8 | 671 | 0 | 17 | 325 |
| Corresponding week, 19471. | 68 |  | 143 | 23 | 2,157 |  | 390 |  | 1581 | 0 | 15 | 764 |
| A verage 1943-47.- | 67 |  | 84 | 219 | 3, 400 | ----- | 2337 | ------ | 1,435 | 1 | 12 | 668 |

${ }_{1}$ Exclusive of Oklahoma City.
2 3-year average, 1945-47.
3 5-year median, 1943-47.

Rates (annual basis) per 100,000 population, by geographic groups, for the 87 cities in the preceding table (latest available estimated population, 34,123,200)


Dysentery, amebic.-Cases: New York 5; Detroit 1; New Orleans 4; San Antonio 1; Los Angeles 3.
Dysentery, bacillary.-Cases: Worcester 1; New York 1; Chicago 2; Charleston, S. C. 1; Birmingham 1.
Dysentery, unspecified.-Cases: San Antonio 7.

## PLAGUE INFECTION IN ARIZONA, NEW MEXICO, AND WASHINGTON

Under date of May 4, 1948, plague infection was reported proved in pools of fleas from rats and mice in Arizona, New Mexico, and Washington as follows:

## ARIZONA

Navajo County.-A pool of 42 fleas from 4 wood rats, Neotoma albigula, trapped April 15 along State Highway No. 173 about 1½ miles southeast of Pinetop.

## NEW MEXICO

Lincoln County.-A pool of 20 fleas from 21 wood rats, Neotoma albigula, trapped April 15, 1 mile north on a ranch road from a location 3 miles east of Capitan on U. S. Highway No. 380.

## washington

Kittitas County.-A pool of 180 fleas from 70 field mice, Microtus sp., trapped April 14 about 6 miles southeast of Kittitas.

## TERRITORIES AND POSSESSIONS <br> Panama Canal Zone

Notifiable diseases-March 1948.-During the month of March 1948, certain notifiable diseases were reported in the Panama Canal Zone and terminal cities as follows:


[^4]
## FOREIGN REPORTS

## CANADA

Provinces-Communicable diseases-Week ended April 17, 1948.During the week ended April 17, 1948, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

| Disease | Prince Edward Island | Nova Scotia | New <br> Brunswick | $\begin{aligned} & \text { Que- } \\ & \text { bec } \end{aligned}$ | Ontario | Manitoba | Sas-katchewan | Alberta | British Columbia | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Chickenpox |  | 41 | 1 | 257 | 516 | 53 | 9 | 30 | 119 | 1, 026 |
| Diphtheria.- |  |  |  | 11 | 2 | 1 | 1 | 2 |  | 17 |
| German measles. |  |  |  | 36 | 21 |  | 2 | 8 | 12 | 79 |
| Influenza-.--.- |  | 17 |  |  | 43 | 16 |  |  | 195 | 271 |
| Measles. |  | 2 |  | 734 | 1,075 | 6 | 7 | 13 | 148 | 1,985 |
| Meningitis, meningococcus |  |  |  |  | 2 |  |  |  |  | 2 |
| Mumps. |  | 19 |  | 373 | 290 | 73 | 107 | 49 | 41 | 952 |
| Poliomyelitis. |  |  |  |  | 1 |  | 2 |  |  | 3 |
| Scarlet fever-...- |  | 5 | 7 | 49 | 92 |  | 3 | 3 | 8 | 167 |
| Tuberculosis (all forms)-- |  | 8 | 13 | 84 | 30 | 24 | 9 | 3 | 47 | 218 |
| Typhoid and paratyphoid fever. |  |  |  | 5 |  |  | 1 |  |  | 6 |
| Undulant fever--------.-- |  |  |  |  | 2 |  |  | 1 |  | 3 |
| Venereal diseases: |  |  |  |  |  |  |  |  |  |  |
| Gonorrhea. - | 3 | 9 | 9 | 129 | 67 | 35 | 8 | 43 5 | 80 | 382 |
| Syphilis <br> Other forms | 3 | 9 | 6 | 97 | 60 | 14 | 8 | 5 | 20 2 | 222 2 |
| Whooping cough |  |  |  | 70 | 29 | 7 | 2 | 20 | 12 | 140 |

## NORTHERN RHODESIA

Smallpox.-Information dated May 5, 1948, states that an epidemic of smallpox has been reported in the Zambesi Valley area, 100 miles east of Livingstone, Northern Rhodesia. The number of cases has not been ascertained, but 74 deaths are reported to have occurred during the past two months.

## WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From consular reports, international health organizations, medical officers of the Public Health Service, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA
(Cases)
Note.-Since many of the figures in the following tables are from weekly reports, the accumulated totals are for approximate dates.


[^5]
## Plague

(Cases)

${ }^{1}$ For the period Apr. 1-10, 1948.
${ }^{2}$ Includes 2 cases of pneumonic plague.
${ }^{3}$ Includes 1 imported case.
${ }^{4}$ Includes 2 imported cases.
5 Imported.

| $\begin{aligned} & \text { SMALLPOX } \\ & \text { (Cases) } \\ & (\mathbf{P}=\text { present) } \end{aligned}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Algeria AFRICA |  | 38 |  |  |  |  |
| Angola | 54 |  |  |  |  |  |
| Basutoland. | 3 |  |  |  |  |  |
| Belgian Congo | ${ }^{1} 387$ | 1240 |  |  |  |  |
| British East Africa: |  |  |  |  |  |  |
| Kenya ${ }^{\text {Nyasaland --.-.-- }}$ | $\begin{array}{rrr}- & 48 \\ - & 861\end{array}$ | 17 341 | 13 47 |  |  |  |
| N Yasasaland..-... | - 861 <br> -- 154 | 341 179 | $\stackrel{47}{22}$ | 87 |  |  |
| Uganda | 81 | 16 | 14 |  |  |  |
| Cameroon (French) |  | 2 |  |  |  |  |
| Dahomey.-....-------....... | 76 | 106 |  | ${ }^{2} 3$ | 37 |  |

See footnotes at end of table.

## SMALLPOX—Continued



[^6]
## TYPHUS FEVER*

| [Cases] |
| :--- |

*Reports from some areas are probably murine type, while others probably include both murine and louse-borne types.
${ }^{1}$ Includes murine type. $\quad{ }^{2}$ For the period Apr. 1-10, $1948 . \quad 3$ Murine type.
4 The previous report of cases of typhus fever in Luxemburg was an error. The cases were later stated to have been typhoid fever.
${ }^{3}$ Deaths.
${ }^{6}$ For the period Jan. 1-Mar. 15, 1948.
${ }^{7}$ For the period Apr. 1-15, 1948.

## YELLOW FEVER

[C indicates cases; $D$, deaths]

| Place | $\left\|\begin{array}{c} \text { January- } \\ \text { February } \\ 1948 \end{array}\right\|$ | $\begin{gathered} \text { March } \\ 1948 \end{gathered}$ | April 1948-week ended- |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 3 | 10 | 17 | 24 |
| africa |  | 1 |  |  |  |  |
| Ivory Coast: <br> Gagnao. |  |  |  |  |  |  |
| Nigeria: Lagos Island ${ }^{1}$ |  |  |  |  |  |  |
| south america |  |  |  |  |  |  |
| Colombia: <br> Antioquia Department | 25 |  |  |  |  |  |
| Boyaca Department.........................-. | 1 |  |  |  |  |  |
|  | 2 |  |  |  |  |  |
| Cundinamarca Department-..-.-.----....-. D | 7 |  |  |  |  |  |
|  | 3 |  |  |  |  |  |

${ }^{1}$ The case of yellow fever in Igbo Village, Lagos Island, Nigeria, reported on p. 592 of the Public Health Reports for Apr. 30, 1948, in the column for week ended March 6, has since been reported not confirmed. 2 Includes deaths used as cases.

## DEATHS DURING WEEK ENDED MAY 1, 1948

[From the Weekly Mortality Index, issued by the National Office of Vital Statistics]

|  | $\begin{aligned} & \text { Week ended } \\ & \text { May } 1, \\ & 1948 \end{aligned}$ | Corresponding week, 1947 |
| :---: | :---: | :---: |
| Data for 93 large cities of the United States: |  |  |
| Total deaths | 9,041 | 8,977 |
| Median for 3 prior years- | 8,974 |  |
| Deaths under 1 year of age.-. | 179, 679 | 747 |
| Median for 3 prior years. | 645 |  |
| Deaths under 1 year of age, first 18 weeks of year | 12,417 | 14, 295 |
| Data from industrial insurance companies: |  |  |
| Policies in force --...... | $71,068,300$ 12,406 | 67, 286, 612 |
| Death claims per 1,000 policies in force, annual rate | 9.1 | 10.6 |
| Death claims per 1,000 policies, first 18 weeks of year, annual rate | 10.2 | 10.0 |


[^0]:    ${ }^{1}$ Not known.

[^1]:    ${ }^{1}$ New York, North Carolina, and Pennsylvania excluded; New York City and Philadelphia included.

[^2]:    ${ }^{3}$ Period ended earlier than Saturday.
    4 Dates between which the approximate low week ends. The specific date will vary from year to year.
    ${ }^{5}$ Including paratyphoid fever and salmonella infections reported separately, as follows: Massachusetts 2, Connecticut 1, New York 1, Pennsylvania 1, Indiana 1, West Virginia 1, South Carolina 1, Georgia 1, Tennessee 1, Texas 1.

    - Including cases reported as streptococcal sore throat.
    *19 of these cases were for a 4-week period.

[^3]:    - In some instances the figures include nonresident cases.

[^4]:    ${ }^{1}$ If place of infection is known, cases are so listed instead of by residence.
    28 recurrent cases.
    ${ }^{3}$ In the Canal Zone only.

[^5]:    ${ }^{1}$ Includes imported cases.
    ${ }^{2}$ For the period Apr. 1-10, 1948
    ${ }^{3}$ For the period Apr. 11-20, 1948.
    ${ }^{4}$ Deaths.

[^6]:    Includes Alastrim.
    ${ }^{2}$ For the period Apr. 1-10, 1948.
    For the period Apr. 11-20, 1948.
    ${ }^{4}$ Imported.

