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## CURRENT PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES[1]

### October 4–31, 1936

*Poliomyelitis*.—During the 4 weeks ended October 31 the reported number of cases (902) of poliomyelitis for the country as a whole dropped slightly from that for the preceding 4-week period. In most of the States in which the disease has been unusually prevalent the peak seems to have been passed. An outbreak in Oklahoma, however, appeared during the latter part of the period, with 29 cases reported from Tulsa for the 4 weeks, and 31 cases for the State, 10 of which occurred in Tulsa County, for the week ended November 7.

With the exception of last year, when an epidemic in States along the Atlantic coast was in progress, the current incidence was the highest reported for this period since 1931. In the North Atlantic regions the current incidence was only about 15 percent of that for the corresponding period last year, and the Mountain and Pacific regions reported more than 30 percent decrease, while the South Atlantic region reported approximately the same incidence as last year. In other regions the incidence was considerably above that of the last 3 or 4 years. The accompanying table gives the incidence since the first of the year together with comparative figures for recent years and the trend during recent weeks for each State.

*Scarlet fever*.—The number of cases of scarlet fever rose from 5,215 for the preceding 4-week period to approximately 10,000 for the 4 weeks ended October 31. Each geographic region contributed to the increase. Compared with recent years the current incidence was about 60 percent of that for the corresponding period in each of the 3 preceding years. Each section of the country shared in the favorable situation of this disease that now exists, after a period of unusual prevalence during 1935 and the first half of the current year.

[1] From the Office of Statistical Investigations, U. S. Public Health Service. These summaries include only the 8 important communicable diseases for which the Public Health Service receives weekly telegraphic reports from the State health officers. The numbers of States included for the various diseases are as follows: Typhoid fever, 48; poliomyelitis, 48; meningococcus meningitis, 48; smallpox, 48; measles, 47; diphtheria, 48; scarlet fever, 48; influenza, 44 States and New York City. The District of Columbia is counted as a State in these reports.

## *Poliomyelitis cases reported in each State [1] during recent weeks of 1936*

| Division and State | 45 weeks ended— | | | | Cases reported in 1936 for week ended— | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nov. 11, 1933 | Nov. 10, 1934 | Nov. 9, 1935 | Nov. 7, 1936 | Sept. 5 | Sept. 12 | Sept. 19 | Sept. 26 | Oct. 3 | Oct. 10 | Oct. 17 | Oct. 24 | Oct. 31 | Nov. 7 |
| All States [2] | 4,593 | 6,869 | 10,151 | 3,914 | 182 | 218 | 242 | 277 | 290 | 264 | 246 | 197 | 195 | 165 |
| New England: | | | | | | | | | | | | | | |
| Maine | 59 | 18 | 140 | 38 | 1 | 4 | 1 | 6 | 0 | 0 | 1 | 0 | 2 | 0 |
| New Hampshire | 7 | 8 | 54 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Vermont | 33 | 8 | 41 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Massachusetts | 353 | 74 | 1,376 | 59 | 0 | 4 | 1 | 1 | 1 | 2 | 2 | 4 | 3 | 0 |
| Rhode Island | 17 | 1 | 326 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Connecticut | 72 | 14 | 391 | 15 | 1 | 0 | 0 | 3 | 0 | 1 | 1 | 2 | 0 | 0 |
| Middle Atlantic: | | | | | | | | | | | | | | |
| New York | 1,338 | 219 | 2,792 | 207 | 20 | 11 | 12 | 16 | 6 | 9 | 14 | 10 | 6 | 6 |
| New Jersey | 239 | 64 | 487 | 28 | 1 | 1 | 1 | 2 | 1 | 2 | 0 | 1 | 0 | 1 |
| Pennsylvania | 374 | 125 | 196 | 116 | 5 | 7 | 8 | 1 | 11 | 7 | 8 | 4 | 9 | 7 |
| East North Central: | | | | | | | | | | | | | | |
| Ohio | 342 | 258 | 95 | 280 | 2 | 18 | 17 | 27 | 40 | 24 | 45 | 24 | 22 | 9 |
| Indiana | 40 | 57 | 42 | 51 | 1 | 2 | 3 | 7 | 3 | 10 | 3 | 2 | 4 | 3 |
| Illinois | 209 | 207 | 231 | 645 | 30 | 52 | 48 | 75 | 70 | 95 | 53 | 45 | 39 | 25 |
| Michigan | 89 | 210 | 600 | 141 | 5 | 2 | 11 | 9 | 15 | 18 | 11 | 15 | 13 | 4 |
| Wisconsin | 54 | 127 | 59 | 42 | 1 | 4 | 4 | 4 | 6 | 7 | 3 | 0 | 3 | 1 |
| West North Central: | | | | | | | | | | | | | | |
| Minnesota | 308 | 84 | 62 | 26 | 0 | 1 | 3 | 3 | 3 | 2 | 2 | 1 | 0 | 1 |
| Iowa | 42 | 32 | 54 | 67 | 3 | 7 | 4 | 7 | 9 | 5 | 7 | 4 | 6 | 3 |
| Missouri | 35 | 32 | 36 | 54 | 2 | 5 | 4 | 2 | 0 | 5 | 8 | 3 | 2 | 5 |
| North Dakota | 84 | 11 | 16 | 18 | 0 | 0 | 2 | 2 | 2 | 0 | 4 | 1 | 1 | 0 |
| South Dakota | 31 | 36 | 10 | 11 | 2 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 |
| Nebraska | 17 | 16 | 13 | 20 | 1 | 3 | 0 | 3 | 2 | 0 | 1 | 2 | 0 | 1 |
| Kansas | 49 | 72 | 31 | 71 | 0 | 5 | 3 | 4 | 10 | 6 | 1 | 8 | 8 | 6 |
| South Atlantic: | | | | | | | | | | | | | | |
| Delaware | 14 | 3 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maryland | 42 | 22 | 97 | 31 | 1 | 1 | 7 | 5 | 1 | 2 | 3 | 1 | 2 | 1 |
| District of Columbia | 6 | 8 | 84 | 7 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 |
| Virginia | 67 | 73 | 676 | 53 | 4 | 2 | 5 | 3 | 3 | 0 | 1 | 1 | 2 | 2 |
| West Virginia | 87 | 81 | 40 | 58 | 3 | 4 | 7 | 4 | 7 | 1 | 3 | 7 | 2 | 6 |
| North Carolina | 25 | 41 | 648 | 45 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 1 |
| South Carolina | 21 | 13 | 30 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 0 |
| Georgia | 8 | 20 | 19 | 112 | 5 | 12 | 9 | 11 | 8 | 7 | 9 | 7 | 5 | 4 |
| Florida | 8 | 15 | 16 | 34 | 2 | 0 | 1 | 0 | 9 | 1 | 3 | 1 | 1 | 2 |
| East South Central: | | | | | | | | | | | | | | |
| Kentucky | 40 | 114 | 305 | 72 | 4 | 1 | 1 | 1 | 3 | 4 | 4 | 9 | 2 | 1 |
| Tennessee | 107 | 59 | 75 | 350 | 22 | 21 | 17 | 23 | 24 | 15 | 8 | 14 | 23 | 2 |
| Alabama | 24 | 47 | 53 | 407 | 5 | 15 | 13 | 6 | 6 | 1 | 5 | 1 | 10 | 2 |
| Mississippi | 8 | 20 | 13 | 121 | 18 | 5 | 6 | 3 | 4 | 4 | 4 | 2 | 2 | 3 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| West North Central: | | | | | | | | | | | | | | |
| Arkansas | 11 | 13 | 25 | 34 | 1 | 0 | 1 | 1 | 0 | 1 | 9 | 4 | 4 | 8 |
| Louisiana | 22 | 17 | 96 | 23 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| Oklahoma | 22 | 11 | 11 | 50 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 2 | 6 | 31 |
| Texas | 40 | 137 | 76 | 46 | 1 | 5 | 1 | 5 | 2 | 1 | 1 | 4 | 6 | 2 |
| Mountain: | | | | | | | | | | | | | | |
| Montana | 7 | 315 | 6 | 15 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Idaho | 2 | 121 | 1 | 16 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| Wyoming | 11 | 8 | 2 | 6 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Colorado | 6 | 16 | 9 | 56 | 2 | 4 | 8 | 9 | 8 | 1 | 1 | 0 | 1 | 10 |
| New Mexico | 6 | 16 | 6 | 24 | 2 | 0 | 4 | 4 | 1 | 2 | 2 | 1 | 3 | 0 |
| Arizona | 11 | 106 | 17 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Utah | 10 | 13 | 9 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Pacific: | | | | | | | | | | | | | | |
| Washington | 76 | 697 | 36 | 63 | 7 | 2 | 10 | 5 | 4 | 4 | 0 | 3 | 1 | 2 |
| Oregon | 28 | 74 | 22 | 36 | 0 | 2 | 2 | 5 | 2 | 2 | 4 | 2 | 2 | 3 |
| California | 122 | 3, 136 | 722 | 318 | 25 | 13 | 15 | 18 | 18 | 10 | 13 | · | 4 | 11 |

[1] A similar table appeared in the Public Health Reports for October 23, 1936, p. 1456.
[2] Nevada excluded; no data

*Smallpox.*—The number of cases of smallpox reported for the current period was 204. Montana reported 68, North Dakota 29, Iowa 20, and South Dakota 12; more than one-half of the total cases were in those 4 States. During this period in 1935, 1934, and 1933 the cases for the entire reporting area totaled 244, 350, and 211, respectively. Only 2 cases were reported from States along the Atlantic Coast, and 6 from the South Central regions.

*Influenza.*—During the current 4-week period the number of cases of influenza totaled 2,659, approximately 1,400 more than were reported for the preceding 4-week period. An increase of this disease is expected at this season of the year, but so far there is nothing to indicate other than a normal rise. The current incidence stood at approximately the average level of the 3 preceding years. Among the various geographic regions the West North Central, South Central, and Mountain and Pacific showed slight increases over the figures for this period in 1935; the East North Central and South Atlantic showed decreases; while the North Atlantic regions reported approximately the same incidence as in 1935.

*Diphtheria.*—The usual seasonal increase of diphtheria continued. For the 4 weeks under consideration 3,507 cases were reported. Compared with recent years the current incidence was about 65 percent of that for the corresponding period in 1935 and 1934 and only about 40 percent of the average incidence for the 5 preceding years. In the South Atlantic region the incidence approached the level of last year very closely, but in all other regions the disease was considerably less prevalent, decreases from the figures for last year ranging from about 30 percent in the Mountain and Pacific regions to about 70 percent in the West North Central region.

*Measles.*—The expected seasonal increase of measles was apparent in all sections of the country. In relation to preceding "normal measles" years the number of cases (2,022) was low, being less than 50 percent of the average incidence for the years 1929–33, inclusive. The current low incidence follows a period of unusual prevalence of this disease in all sections of the country during the years 1934 and 1935; each geographic region is now reporting the lowest incidence in recent years.

*Typhoid fever.*—For the 4 weeks ended October 31 there were 1,768 cases of typhoid fever reported as compared with 1,600, 1,959, and 2,326 for the corresponding period in the years 1935, 1934, and 1933, respectively. Among the various geographic regions, those along the Atlantic coast showed rather significant increases over last year, the Mountain and Pacific regions reported a 15 percent decrease, while in the North and South Central regions the incidence was about on a level with that of last year.

*Mortality, all causes.*—The average mortality rate from all causes for large cities for the 4 weeks ended October 31 as reported by the Bureau of the Census was 11.8 per 1,000 inhabitants (annual basis). The rates for the separate weeks were 11.1, 10.9, 11.3 and 11.1, respectively. For the corresponding 4-week period in 1935, 1934, and 1933 the rates were 10.8, 10.6, and 10.6, respectively. An examination of the data for a group of large cities shows that during this period the death rate in some cities, located mostly in the northern half of the country, was more than twice the rate for the corresponding period last year. Among the communicable diseases, however, there was apparently little contribution to the rise; influenza and pneumonia, which are quite often responsible for a rise in the death rate at this time, showed no increase other than the normal expectancy.

# AUDIOMETRIC STUDIES ON SCHOOL CHILDREN

## II. Types of Audiometric Curves[1]

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This paper presents data on the hearing of almost 1,400 selected children who were tested with a Western Electric Co. 2–A audiometer. A description is given of the audiometric curves and of their characteristics in relation to differences in age, sex, condition of tympanic membrane, nose and tonsils, frequency of upper respiratory infections, and history of otitis media.

### MATERIAL AND METHOD

The material used here is part of that collected since 1931 by the Office of Child Hygiene, of the Public Health Service, in a survey of Washington (D. C.) school children. A more complete discussion of the investigation is given in the first paper of this series (*7*).

The subjects whose hearing records constitute this material comprise (*a*) about 700 children who, when tested previously with a 4–A audiometer, showed a hearing loss of 9 or more S. U. (sensation units), and (*b*) an approximately equal number of children of the same age, sex, and school grade whose 4–A tests showed a hearing loss not greater than 6 S. U.

According to this method of selection, the records obtained cannot be considered as furnishing a completely representative sample of the hearing of children in the general population, and it might be expected that the two groups of children would be unequivocally differentiated relative to their hearing. Actually this is not so, owing to the lack of

[1] From the Office of Child Hygiene Investigations, U. S. Public Health Service. The author wishes to acknowledge the valuable assistance of B. L. Jarman, M. D., who made the audiometric and clinical examinations.

precision of tests made with the 4–A audiometer. Among the children examined, 71 percent of those with a hearing loss of 9 S. U., or more, have good hearing (type I audiogram; see fig. 1); among the children with less than 6 S. U. hearing loss, 5 percent have some hearing impairment, one child being almost totally deaf in one ear. It is worthy of note that, in answer to a questionnaire, 78 children with impaired hearing attributed their condition to some specific cause—trauma in 2 instances, childhood diseases (measles, mumps, diphtheria, scarlet fever) in 38 cases, and chronic discharging ears in 38 cases.

The initial step in the analysis of the data was the classification of the audiograms of hearing by air conduction into the following groups:[3]

Group I: Good hearing for all tones. All tones are heard at an intensity equal to or less than 20 db. (decibels).

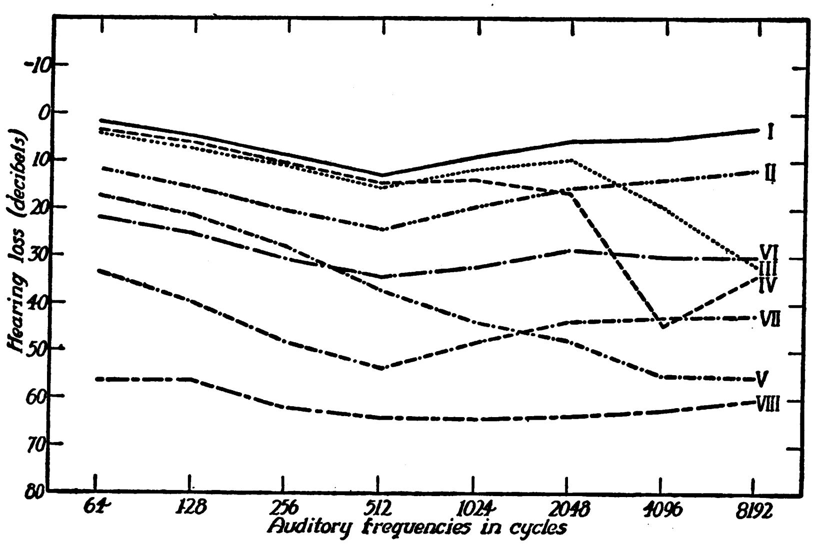


FIGURE 1.—Average thresholds of audiograms falling in specified groups

Group II: Slight loss for auditory frequencies of the middle range (256 to 1,024 cycles.) These tones are heard at an intensity between 25 and 35 db. All other tones are heard as in I.

Group III: Slight loss for high tones. Tones of 2,048, 4,096, and 8,192 cycles are heard between 20 and 30 db. All other tones heard as in I.

Group IV: Marked high tone loss of the abrupt type. Tones of 2,048, 4,096, and 8,192 cycles heard only at an intensity greater than 30 db. All other tones heard as in I.

Group V: Marked high tone loss with involvement of low and middle tones. The curves slope downwards from left to right and

[3] This is a slight modification of the method of classification described by the author in references (4), (5), and (6).

correspond to the high tone loss of the "gradual" type discussed by Crowe et al. (*8*). All tones except those of 64 and 128 cycles are heard only at an intensity greater than 20 db. The impairment for high tones is greater than that for middle tones.

Group VI: Moderate loss for all tones. Thresholds are between 25 and 45 db.

Group VII: Marked loss for all tones. Thresholds are between 45 and 65 db.

Group VIII: Extreme loss for all tones. No tone is heard at an intensity less than 55 db. Here are included cases in which the child did not respond to any tone, even at the maximum intensity of the audiometer.

For purposes of illustration, in figure 1 is presented the mean or average curve [3] for each of the 8 types of audiograms. These average curves were obtained by calculating, for the audiograms that fell into a given group, the mean threshold for each tone. Certain general characteristics of the different types of audiograms may be visualized with the aid of this figure. Thus, groups I, II, VI, VII, and VIII, in the order mentioned, represent a reasonably regular sequence in which hearing is increasingly diminished equally for all tones; groups III and IV represent cases with normal hearing except for the diminution of acuity for high tones; group V represents cases in which the lowest tones are heard at approximately normal intensities, but as the pitch is raised the hearing acuity is decreased.

The next step in this analysis was to classify the cases of hearing impairment according to the two fundamental types of aural lesions. As usual, the relationship between the air and bone conduction acuity served to differentiate between conductive deafness and so-called nerve deafness. In this material, a bone conduction receiver was employed in the place of tuning forks, but at the time no attempt was made to use some "masking" device in order to exclude the participation of one ear while testing the other. This is a rather serious omission, since no Weber test was made.[4] For the purposes of the study, the bone conduction threshold for 512 cycles was used as a measure of bone conduction acuity and the children in the following groups were classified as having a conductive type of hearing impairment.

1. Children with bilateral hearing impairment by air conduction and for whom the threshold of bone conduction acuity lies within the range marked out by two standard deviations above and below the

[3] The means for group VIII are not precise, because when a tone was not perceived at the maximum intensity of this audiometer, the threshold was assumed.

[4] It cannot be emphasized too strongly that "masking" of one ear while testing the other is an essential procedure if the results of hearing tests are to have any diagnostic or scientific value. This has been particularly stressed by the Committee on Methods of Testing Hearing by Bone Conduction of the American Otological Society at the meeting held in Detroit in May 1936.

mean threshold found for children with good hearing.[5] There are 15 children in this group.

2. Children with a unilateral hearing impairment by air conduction and whose bone conduction acuity for the poorer hearing ear has a threshold inferior in arithmetic value equal to, or no more than, 10 db. higher than that of the better ear. There are 79 such children, 39 with a conductive lesion in the right ear and 40 with a conductive lesion in the left ear.

All other cases in which the air conduction is impaired have been considered as having a nerve type of deafness.

### TYPES OF AUDIOGRAMS

The absolute and percentage distributions of the audiograms, grouped as described in the foregoing section, are shown in table 1. All the types of audiometric curves are represented. Of course the majority of cases fall in group I (good hearing); but it is interesting to note the presence of many "high tone loss" cases (groups III, IV, and V), the pathology of which has been definitely established by Crowe, Guild, and Polvogt (*8*). These authors have demonstrated that degeneration of the nerve and end-organ in the basal turn of the cochlea usually accompanies high tone loss of the abrupt type (for example, group IV). In such cases the degree and extent of damage to the nerve and end-organ are related roughly to the amount of hearing loss and to the tones involved. On the other hand, high tone loss of the gradual type[6] (group V of this classification) is characterized by degeneration of the nerve *alone* at different levels of the basal turn of the cochlea.

TABLE 1.—*Distribution of audiograms of Washington (D. C.) school children*

| Audiogram group | Frequency | | Audiogram group | Frequency | |
|---|---|---|---|---|---|
| | Number | Percent | | Number | Percent |
| I | 2,345 | 85.52 | VI | 61 | 2.23 |
| II | 82 | 2.99 | VII | 25 | .91 |
| III | 82 | 2.99 | VIII | 29 | 1.06 |
| IV | 79 | 2.88 | | | |
| V | 39 | 1.42 | Total | 2,742 | 100.00 |

In the study of the relationship between hearing acuity and individual characteristics (age, heredity, sex, etc.) or systemic diseases, the hearing of the poorer ear is taken as a measure of the subject's auditory condition. In table 2 is given the distribution of the children according to the hearing of the poorer ear and the relation of the bone

[5] The mean is 59.81±0.06 db., and the standard deviation is equal to 3.84±0.039 db.

[6] The Rinne test being positive, that is, air conduction is better than bone conduction.

**TABLE 2.**—*Distribution of children according to the type of audiogram of the poorer hearing ear*

| Audiogram group | Bone conduction proportionally reduced (AC>BC) | | Bone conduction not reduced (conductive deafness) | | Total | |
|---|---|---|---|---|---|---|
| | Number of children | Percent of grand total | Number of children | Percent of grand total | Number of children | Percent |
| I | 1,083 | 78.99 | | | 1,083 | 78.99 |
| II | 53 | 3.86 | | | 53 | 3.86 |
| III | 52 | 3.80 | | | 52 | 3.80 |
| IV | 54 | 3.94 | | | 54 | 3.94 |
| V | 11 | .80 | 18 | 1.31 | 29 | 2.11 |
| VI | 9 | .65 | 39 | 2.85 | 48 | 3.50 |
| VII | 4 | .30 | 19 | 1.38 | 23 | 1.68 |
| VIII | 11 | .80 | 18 | 1.32 | 29 | 2.12 |
| Total | 1,277 | 93.14 | 94 | 6.86 | 1,371 | 100.00 |

conduction to the air conduction in that ear. The following facts may be deduced from this and the preceding table:

1. The audiograms of children fall into the same characteristic groups as those observed in adults.

2. The types of audiogram usually considered a characteristic of advancing age (groups III and IV) are also found in children. Of all the audiograms that fall in these two groups, over 25 percent show the so-called 4,096 "dip." Evidence presented elsewhere by the author (*4*) indicates that this particular "dip" is a first sign of the degenerative process which results in the loss of acuity for all high tones.

3. With the exception of the children included in groups I, II, and VI, the remaining have the types of hearing impairment which have been shown to accompany definite pathologic changes in the middle ear, inner ear, or both.

4. A conductive lesion is responsible for about two-thirds of the cases with moderate or marked impairment for tones of the middle and low range. There are 129 children whose audiograms fall in groups V, VI, VII, and VIII, and 94 of these have a conductive type of deafness.

In order to judge the significance of these data, they may be compared with those obtained from hospitalized youths, less than 20 years old, examined in the Otological Research Laboratory of the Johns Hopkins University (*4*). This comparison (table 3) shows that the incidence of children with good hearing (group I) is higher in the present material while the relative number of children with a slight high tone loss (group III) is lower; otherwise the two distributions are closely alike. Especially is this true for the incidence of marked hearing impairment. The differences are very probably due to the fact that the hospitalized children are slightly older; and, as will be shown, this is a matter of some importance with regard to the incidence of high tone loss. Therefore, notwithstanding the method of selection of the material, it is possible to generalize to some extent regarding the relative frequency of the different forms of impairment.

TABLE 3.—*Comparative distributions of audiograms of the poorer hearing ear of Washington (D. C.) school children and of unselected hospital patients less than 20 years of age*

| Audiogram group | Percent of children with specified audiograms | |
|---|---|---|
| | School children | Hospital patients[1] |
| I | 78.99 | 69.35 |
| III | 3.80 | 13.14 |
| IV | 3.94 | 2.92 |
| V (AC>BC) | .80 | ---------- |
| II, VI, VII (AC>BC) | 4.81 | 8.76 |
| V, VI, VII (BC>AC) | 5.54 | 3.64 |
| VIII | 2.12 | 2.19 |
| Total | 100.00 | 100.00 |
| Number of children | 1,371 | 147 |

[1] Tested at the Otological Research Laboratory of the Johns Hopkins University. *Cf.* Ciocco (4).

AGE AND SEX

The distribution of these children according to age and according to the hearing of the poorer ear is shown in table 4. Since the number of cases in most of the hearing groups is small, the following combinations have been made (*a*) "Good hearing", to include only group I; (*b*) "high tone loss", to include groups III and IV; (*c*) "impairment for conversation",[7] to include the remaining groups. From table 4 the following facts may be noted:

TABLE 4.—*Age and hearing*

| Age (in years) | Hearing of poorer ear | | | | | Number of children |
|---|---|---|---|---|---|---|
| | Good | High tone loss | Impairment for conversation: Bone conduction reduced (AC>BC) | Impairment for conversation: Bone conduction good (conductive deafness) | Total | |
| | *Percent* | *Percent* | *Percent* | *Percent* | *Percent* | |
| 7-9 | 88.34 | 3.40 | 5.83 | 2.43 | 100.0 | 206 |
| 10-11 | 83.54 | 5.57 | 6.33 | 4.56 | 100.0 | 395 |
| 12-13 | 77.37 | 9.50 | 5.86 | 7.27 | 100.0 | 358 |
| 14-15 | 73.45 | 9.30 | 6.19 | 11.06 | 100.0 | 226 |
| 16 and over | 68.81 | 11.83 | 8.60 | 10.76 | 100.0 | 186 |

1. The percentage of children with good hearing decreases as age advances.

2. The incidence of high tone loss increases with advancing age.

[7] It is understood that some of the children with high tone loss will also have difficulty in understanding speech.

3. Children with impairment for conversation, whether associated with a conductive or nonconductive type of lesion, are more frequent in the older age groups than in the younger ones. This is to be expected, because the probability of infection is dependent upon the length of exposure to risk.

The decrease in the perception of high tones, presbyacusia, is a well-known phenomenon which accompanies increasing age. However, not until instruments were constructed to measure hearing acuity was its onset and mode of progression described. Zwaardemaker (*13*), in 1891, found, with the Galton whistle, that the upper limit of auditory perception was lowered with increasing age. The same was shown in 1913 by Struycken (*11*), who used his monochord. Bunch (*1*), in 1929, was the first to demonstrate this type of hearing impairment when the subjects were tested with an audiometer. He found that, together with the lowering of the upper auditory limit, this phenomenon is accompanied by a decreased perception for the tones of 4,096 cycles and higher. In 1932, Ciocco (*4*) presented evidence to indicate that, as age increases, the audiometric curve first shows a 4,096 "dip" and then becomes similar to the curve represented by Group IV in figure 1. While the pathology of this type of hearing loss is fairly well known (*8*), its etiology remains a problem to be solved. From the results shown in table 4, one must conclude that, contrary to general assumption, the pathologic process which causes this type of impairment can originate early in life.

Subdivision of the data by sex shows there are records for 704 boys and for 667 girls. The absolute and percentage distributions of the audiograms of the poorer ears for the two sexes are shown in table 5. This table shows that the only statistically significant difference between the boys and girls lies in the incidence of marked high tone loss, group IV, in which there are five times as many boys as girls.[8] The greater frequency of high tone loss in males when compared to females is a characteristic first observed in adults by Bunch and Raiford (*3*) and confirmed by Ciocco (*4*). Its physiologic or pathologic significance has not yet been discovered. The hypothesis has been advanced that this difference is a consequence of the fact that men are more likely to encounter injurious noises in their occupations, while women, in general, lead a more sheltered life. The findings here reported seem to contradict this assumption, since the environment of the boys and girls is probably very much the same.

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[8] The percentage of boys with a group IV type of audiogram is $6.90 \pm 0.99$, that of girls is equal to $1.44 \pm 0.48$. The difference is 4.96 times its probable error.

TABLE 5.—*Hearing of poorer ear in boys and girls*

| Audiogram group | Bone conduction proportionally reduced (AC>BC) | | | | Bone conduction good (conductive deafness) | | | |
|---|---|---|---|---|---|---|---|---|
| | Boys | | Girls | | Boys | | Girls | |
| | Number of children | Percent | Number of children | Percent | Number of children | Percent | Number of children | Percent |
| I | 534 | 81.90 | 549 | 87.84 | | | | |
| II | 22 | 3.37 | 31 | 4.96 | | | | |
| III | 33 | 5.06 | 19 | 3.04 | | | | |
| IV | 45 | 6.90 | 9 | 1.44 | | | | |
| V | 6 | .92 | 5 | .80 | 11 | 21.15 | 7 | 16.66 |
| VI | 3 | .46 | 6 | .96 | 23 | 44.23 | 16 | 38.10 |
| VII | 3 | .46 | 1 | .16 | 8 | 15.38 | 11 | 26.19 |
| VIII | 6 | .93 | 5 | .80 | 10 | 19.24 | 8 | 19.05 |
| Total | 652 | 100.00 | 625 | 100.00 | 52 | 100.00 | 42 | 100.00 |

In this material the average age of the males, $12.38 \pm 0.07$ years, is higher than that of the females, $11.99 \pm 0.07$ years. In order to test whether the difference in the incidence of high tone loss found in the two sexes is due to the difference in ages, these must be equalized. If the boys had the same age distribution as the girls, on the basis of the percentages shown in table 5, the following distribution would be expected:

| | Boys (expected) | Girls (actual) |
|---|---|---|
| Good hearing | 516.33 | 549 |
| High tone loss | 70.93 | 28 |
| Impairment for speech | 37.74 | 48 |
| Total | 625.00 | 625 |

These distributions differ in the same sense as those of table 5; a chi-square equal to 30.82 shows that the differences are statistically significant. Most of the chi-square value is due to the different incidence of cases with marked high tone loss. It is evident, therefore, that the difference in the incidence of high tone loss as found in the two sexes is independent of age. Moreover, the higher incidence of high tone loss in boys is true for each age group. This appears to indicate that, whatever is the cause of the sex difference in the loss of perception for high tones, it is not associated with the onset of puberty.

The fact that the influence of age and sex on the incidence of high tone loss is evident even in children, appears to be of the greatest importance. In the first place, it means that, in order to discover the etiology of high tone loss, all investigations should begin with the study of hearing in childhood. In the second place, it is clear that the different incidence of high tone loss in males and females, which is also manifested in the youngest children, should be regarded as a true secondary characteristic of differentiation between the sexes. As a consequence, it may be concluded that the susceptibility to loss of high tones is intimately associated with the constitutional make-up of the individual. This may explain, also, why attempts to correlate various disease conditions with high tone loss have been fruitless, and indicates, furthermore, that future investigation on this problem should be directed toward a more adequate study of the individual constitution.

### CONDITION OF TYMPANIC MEMBRANE AND HISTORY OF OTITIS MEDIA

The condition of the tympanic membrane, as given in the records, was classified in the following manner: (1) Normal; (2) slight changes, including slight or moderate retraction and (or) thickening; (3) marked changes, including marked retraction or thickening, calcification, scarring; (4) perforations. In table 6 the percentage distributions are given for the different conditions of the tympanic membrane for the ears that fall in several hearing groups. The incidence for marked changes and perforations combined is less for those ears with good hearing than for those with high-tone loss or with impaired hearing for conversation and reduced bone conduction acuity. The higher incidence of high-tone loss cases, when compared with ears with good hearing, is very interesting and raises again the question of what part middle-ear infections play in loss of perception for high tones. It may be recalled that Politzer (*10*), Wanner (*12*), and Struycken (*11*), have at various times expressed their opinion that middle-ear infections do affect the perception for high tones. Bunch and Grove's (*2*) findings lend themselves to this interpretation, and certain cases cited by Ciocco (*4*) also seem to indicate a causal relationship between decreased acuity for high tones and middle-ear infection.

TABLE 6.—*Tympanic membrane and hearing*

| Appearance of tympanic membrane | Hearing of poorer ear | | | |
|---|---|---|---|---|
| | Good | High tone loss | Impairment for conversation | |
| | | | Bone conduction reduced (AC>BC) | Bone conduction good (conductive deafness) |
| | *Percent* | *Percent* | *Percent* | *Percent* |
| Normal | 9.96 | 8.86 | 1.62 | 3.84 |
| Slight changes | 85.63 | 78.48 | 78.87 | 51.92 |
| Marked changes | 3.85 | 6.96 | 13.82 | 11.54 |
| Perforations | .56 | 5.70 | 5.69 | 32.70 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 |
| Number of ears | 2,339 | 158 | 123 | 104 |

As expected, the incidence of marked changes and perforations of the tympanic membrane is markedly higher in the ears with a conductive type of lesion. The incidence in these is about 10 times as high as in those with good hearing, 44.24 percent and 4.41 percent, respectively. When one recalls that an otoscopic examination does not always reveal signs of past infections of the middle ear, the high incidence of marked changes and perforations found in the children with a conductive type of hearing impairment clearly manifests the importance of discharging ears as a factor in producing hearing impairment in children. This is also evident from the statements regarding history of earache and discharge. Of the children with good hearing, 19.3 percent have had earaches and 14 percent have had discharging ears. The children with high-tone loss and with impairment for conversation and reduced bone conduction acuity give only a slightly higher incidence—21.5 percent and 25.2 percent, respectively—have had earaches, and 20.1 percent and 22 percent, respectively, have had discharging ears. Of the children with conductive deafness, 18.1 percent have had earache and 54.3 percent have had discharging ears.

The relationship between the appearance of the tympanic membrane and hearing acuity may also be studied from another viewpoint. From table 6 it is seen that audiograms representative of good hearing are found for ears showing marked changes and perforations of the tympanic membrane. It can be safely presumed that in these ears the ossicular mechanism and the cochlea are intact. Therefore, by limiting the analysis to these cases it can be determined whether or not the auditory acuity is affected by pathologic changes of the tympanic membrane alone or accompanied by only minor middle-ear lesions. In table 7 are given the average thresholds of air-conduction acuity for cases of good hearing in relation to the appearance of the tympanic membrane. The air-conduction acuity is best for those ears with normal tympanic membranes; it is worse for the ears showing marked changes and perforations. For each auditory frequency the difference in mean thresholds between the ears with normal tympanic membranes and those with slight changes is generally less than the difference between the latter and the ears with marked changes and perforations. The differences are fairly constant for all tones and all are statistically significant.

TABLE 7.—*Mean threshold (in decibels) of conduction acuity in relation to condition of tympanic membrane (children with good hearing)*

| Condition of tympanic membrane | Auditory frequencies (in cycles) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 64 | 128 | 256 | 512 | 1,024 | 2,048 | 4,096 | 8,192 |
| Normal | 0.74±0.08 | 4.05±0.07 | 8.17±0.08 | 12.41±0.06 | 8.66±0.07 | 4.70±0.08 | 3.57±0.09 | 1.20±0.11 |
| Slight changes | 1.84± .03 | 4.86± .03 | 9.06± .03 | 13.18± .02 | 9.38± .03 | 5.82± .03 | 5.20± .03 | 3.01± .04 |
| Marked changes and perforations | 2.91± .12 | 6.16± .11 | 10.41± .11 | 14.36± .11 | 10.17± .13 | 6.69± .12 | 7.09± .17 | 5.23± .18 |

These results point to the conclusion that changes in the appearance of the tympanic membrane, whether or not they coexist with minor lesions of the middle ear, do affect the hearing acuity sufficiently to be detected.

## CONDITIONS OF NOSE AND THROAT AND HISTORY OF UPPER RESPIRATORY INFECTIONS

Nothing remarkable is observed regarding the relationship between the condition of the nose, as described by the physician, and the hearing of these children. A deflection of the septum is found in more than 50 percent of the children. This ratio does not vary significantly in the different hearing groups, although it is slightly lower in the children with good hearing. About 30 percent of the children with good hearing have nasal passages that appear normal on inspection. This is found slightly less often (in 24 percent of the cases) in the other children.

The condition of the tonsils found at the time of the examination is reported in table 8. The incidence of removed tonsils is higher in children with hearing impaired for conversation than for the children whose audiograms fall in the other two hearing groups. The explanation of this is simple when it is recalled that the removal of tonsils, as a focus of infection, is usually one of the first steps taken in the treatment of auditory disorders. In those cases in which the tonsils were still present, the proportion of children with normal and diseased tonsils is practically the same for each hearing group.

TABLE 8.—*Hearing and condition of tonsils*

| Condition of tonsils | Hearing of poorer ear | | | |
|---|---|---|---|---|
| | Good | High tone loss | Impairment for conversation | |
| | | | Bone conduction reduced (AC>BC) | Bone conduction good (conductive deafness) |
| | *Percent* | *Percent* | *Percent* | *Percent* |
| Removed | 54.80 | 59.43 | 61.36 | 70.21 |
| Normal | 32.07 | 27.36 | 22.73 | 20.21 |
| Diseased | 13.13 | 13.21 | 15.91 | 9.58 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 |
| Number of children | 1,082 | 106 | 88 | 94 |

A history of frequent upper respiratory infections was elicited from 411 of the 1,246 children, that is, 33 percent of the children who replied to the question. Of the children with good hearing, 34 percent complained of such disturbance; of the children with high-tone loss, 28 percent; and 47 percent of those with hearing impairment for conversation and reduced bone-conduction acuity. These differences are not, however, statistically significant.

From these facts it appears that there exists no relationship between type and degree of hearing impairment and conditions of nose and tonsils, as observed at the time of the examination, or from past history of frequent upper respiratory infection.

## SUMMARY

Statistical analyses of the hearing records of about 1,400 Washington (D. C.) school children, tested with a Western Electric Co. 2-A audiometer, reveal the following facts:

1. The audiometric curves of children may assume any of the characteristics found in adults.

2. A conductive lesion is responsible for about two-thirds of the cases with moderate or marked hearing impairment which involves tones of the middle and low ranges.

3. The incidence of high-tone loss increases regularly with advancing age and is greater in boys than in girls.

4. Normal tympanic membranes and those with slight changes are found in 96 percent of the ears which have good hearing, in 87 percent of those with high-tone loss, in 80 percent of those with hearing impairment for conversation and reduced bone-conduction acuity, and in only 56 percent of the ears with conduction deafness. In ears with good hearing, the air-conduction acuity is best in those cases with normal tympanic membranes and worse when the tympanic membrane shows marked changes or perforations.

5. Apparently there exists no relationship between type and degree of hearing impairment and condition of nose and tonsils as observed at the time of the examination.

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## COURT DECISION ON PUBLIC HEALTH

*State regulations for the control of bovine tuberculosis held invalid.*—(South Dakota Supreme Court; *Anderson* v. *Russell*, State Secretary of Agriculture, *et al.*, 268 N. W. 386; decided June 24, 1936.) The regulations promulgated by the Secretary of Agriculture of the State of South Dakota for the eradication of bovine tuberculosis provided that all cattle, with a few exceptions, should be subjected to an official tuberculin test before entering certain quarantined areas, that it should be the duty of the department of agriculture to quarantine all farms or places where the owners refused to submit their cattle to the tuberculin test, and that the owners who failed to submit their cattle to the tuberculin test would be guilty of a misdemeanor. The plaintiff, whose herd of cattle had been examined and found free from tuberculosis by a private veterinarian not in the employ of the State, brought an action to restrain the State officials from quarantining his herd of cattle and forcing him to submit such cattle to a tuberculin test by the State agent. The trial court enjoined the State officials from quarantining the plaintiff's cattle until it was determined that said cattle were infected with tuberculosis, and from subjecting the cattle to the tuberculin test without the plaintiff's consent. On appeal this order was affirmed for the following reasons:

1. That the laws of South Dakota merely conferred upon the secretary of agriculture the power and right to make investigations and quarantine and control in event of the established existence of communicable disease as a fact.

2. That the legislature had not delegated the compulsory power to the secretary of agriculture and that if there had been an attempt to delegate such power it would have failed as an improper delegation.

# DEATHS DURING WEEK ENDED OCT. 31, 1936

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

| | Week ended Oct. 31, 1936 | Corresponding week, 1935 |
|---|---|---|
| Data from 86 large cities of the United States: | | |
| Total deaths | 7,938 | 7,842 |
| Deaths per 1,000 population, annual basis | 11.1 | 10.9 |
| Deaths under 1 year of age | 521 | 509 |
| Deaths under 1 year of age per 1,000 estimated live births | 47 | 47 |
| Deaths per 1,000 population, annual basis, first 44 weeks of year | 12.1 | 11.8 |
| Data from industrial insurance companies: | | |
| Policies in force | 68,485,845 | 67,661,227 |
| Number of death claims | 11,908 | 11,473 |
| Death claims per 1,000 policies in force, annual rate | 9.1 | 8.7 |
| Death claims per 1,000 policies, first 44 weeks of year, annual rate | 9.8 | 9.6 |

# PREVALENCE OF 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

## CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

### Reports for Weeks Ended Nov. 7, 1936, and Nov. 9, 1935

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Nov. 7, 1936, and Nov. 9, 1935*

| Division and State | Diphtheria | | Influenza | | Measles | | Meningococcus meningitis | |
|---|---|---|---|---|---|---|---|---|
| | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 |
| New England States: | | | | | | | | |
| Maine | 4 | 2 | | | 12 | 106 | 0 | 0 |
| New Hampshire | | | | | 3 | | 0 | 0 |
| Vermont | | 1 | | | 1 | 21 | 0 | 0 |
| Massachusetts | 2 | 8 | | | 60 | 82 | 2 | 0 |
| Rhode Island | | | | | 155 | 4 | 0 | 0 |
| Connecticut | 3 | 2 | 3 | 1 | 36 | 32 | 0 | 0 |
| Middle Atlantic States: | | | | | | | | |
| New York | 22 | 39 | [1] 8 | [1] 5 | 139 | 411 | 9 | 9 |
| New Jersey | 16 | 10 | 18 | 6 | 48 | 12 | 2 | 0 |
| Pennsylvania | 28 | 39 | | | 18 | 73 | 6 | 5 |
| East North Central States: | | | | | | | | |
| Ohio | 28 | 69 | 6 | 2 | 10 | 56 | 2 | 1 |
| Indiana | 14 | 105 | 10 | 31 | 7 | 9 | 1 | 3 |
| Illinois | 32 | 103 | 13 | 12 | 14 | 13 | 3 | 9 |
| Michigan | 15 | 7 | 1 | 1 | 15 | 26 | 3 | 1 |
| Wisconsin | 5 | 6 | 24 | 42 | 16 | 52 | 0 | 1 |
| West North Central States: | | | | | | | | |
| Minnesota | 48 | 20 | 1 | | 19 | 39 | 0 | 0 |
| Iowa | 11 | 16 | 1 | 2 | | 6 | 0 | 2 |
| Missouri | 20 | 82 | 49 | 64 | 2 | 9 | 2 | 4 |
| North Dakota | 1 | 1 | | | | 13 | 0 | 0 |
| South Dakota | | 1 | | | 1 | | 0 | 2 |
| Nebraska | | 6 | | | 1 | 13 | 0 | 0 |
| Kansas | 21 | 12 | | | 3 | 4 | 0 | 4 |
| South Atlantic States: | | | | | | | | |
| Delaware | 1 | 1 | | | 3 | 29 | 1 | 0 |
| Maryland [3] | 14 | 13 | 8 | 6 | 10 | 2 | 4 | 2 |
| District of Columbia | 15 | 18 | 3 | 1 | 5 | 2 | 5 | 2 |
| Virginia | 54 | 86 | | | 8 | 18 | 3 | 1 |
| West Virginia | 51 | 48 | 16 | 10 | 10 | 3 | 0 | 1 |
| North Carolina | 163 | 105 | 5 | 8 | 7 | 1 | 3 | 2 |
| South Carolina [3] | 22 | 13 | 194 | 114 | | | 0 | 0 |
| Georgia [3] | 44 | 50 | | | | | 0 | 0 |
| Florida [3] | 12 | 17 | | 2 | | | 0 | 1 |
| East South Central States: | | | | | | | | |
| Kentucky | 31 | 68 | 10 | 6 | 36 | 44 | 6 | 0 |
| Tennessee | 36 | 54 | 30 | 22 | 1 | | 3 | 2 |
| Alabama [3] | 55 | 37 | 52 | 35 | | | 0 | 2 |
| Mississippi | 17 | 24 | | | | | 1 | 1 |

See footnotes at end of table.

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Nov. 7, 1936, and Nov. 9, 1935*—Continued

| Division and State | Diphtheria | | Influenza | | Measles | | Meningococcus meningitis | |
|---|---|---|---|---|---|---|---|---|
| | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 |
| West South Central States: | | | | | | | | |
| Arkansas | 8 | 20 | 17 | 2 | | 3 | 0 | 0 |
| Louisiana | 29 | 23 | 36 | 13 | 2 | 13 | 1 | 3 |
| Oklahoma [4] | 8 | 18 | 46 | 15 | | 4 | 2 | 5 |
| Texas [3] | 36 | 178 | 60 | 137 | 22 | 12 | 1 | 0 |
| Mountain States: | | | | | | | | |
| Montana | | 3 | 11 | 5 | 1 | 15 | 0 | 1 |
| Idaho | 2 | | 3 | | 56 | 8 | 0 | 0 |
| Wyoming | 2 | 2 | | | 5 | 13 | 1 | 0 |
| Colorado | 8 | 11 | | | 1 | 2 | 0 | 1 |
| New Mexico | 2 | 8 | | 3 | 4 | | 0 | 0 |
| Arizona | 2 | | 43 | 15 | 38 | | 0 | 1 |
| Utah [2] | 1 | | | | 12 | 4 | 3 | 0 |
| Pacific States: | | | | | | | | |
| Washington | 4 | 3 | 3 | | 24 | 49 | 1 | 0 |
| Oregon [5] | 1 | 1 | 19 | 24 | 1 | 97 | 0 | 0 |
| California | 53 | 54 | 27 | 32 | 22 | 154 | 2 | 5 |
| Total | 941 | 1,384 | 717 | 616 | 828 | 1,454 | 67 | 71 |
| First 45 weeks of year | 22,885 | 30,393 | 146,905 | 110,137 | 275,341 | 705,648 | 6,676 | 4,938 |

| Division and State | Poliomyelitis | | Scarlet fever | | Smallpox | | Typhoid fever | |
|---|---|---|---|---|---|---|---|---|
| | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 |
| New England States: | | | | | | | | |
| Maine | 0 | 6 | 17 | 14 | 0 | 0 | 3 | 1 |
| New Hampshire | 0 | 0 | 11 | 4 | 0 | 0 | 0 | 0 |
| Vermont | 0 | 1 | 4 | 4 | 0 | 0 | 0 | 0 |
| Massachusetts | 0 | 26 | 123 | 191 | 0 | 0 | 4 | 3 |
| Rhode Island | 0 | 3 | 12 | 7 | 0 | 0 | 0 | 0 |
| Connecticut | 0 | 7 | 50 | 32 | 0 | 0 | 0 | 1 |
| Middle Atlantic States: | | | | | | | | |
| New York | 6 | 25 | 321 | 330 | 0 | 0 | 14 | 13 |
| New Jersey | 1 | 12 | 39 | 67 | 0 | 0 | 4 | 1 |
| Pennsylvania | 7 | 3 | 213 | 354 | 0 | 0 | 20 | 13 |
| East North Central States: | | | | | | | | |
| Ohio | 9 | 2 | 251 | 242 | 0 | 0 | 27 | 10 |
| Indiana | 3 | 3 | 71 | 162 | 3 | 1 | 1 | 5 |
| Illinois | 25 | 6 | 274 | 451 | 1 | 1 | 23 | 17 |
| Michigan | 4 | 8 | 190 | 155 | 1 | 0 | 14 | 6 |
| Wisconsin | 1 | 1 | 210 | 315 | 2 | 15 | 2 | 2 |
| West North Central States: | | | | | | | | |
| Minnesota | 1 | 0 | 99 | 233 | 1 | 0 | 0 | 1 |
| Iowa | 3 | 2 | 66 | 97 | 6 | 3 | 5 | 3 |
| Missouri | 5 | 2 | 61 | 100 | 0 | 2 | 7 | 9 |
| North Dakota | 0 | 3 | 43 | 40 | 5 | 1 | 2 | 0 |
| South Dakota | 1 | 0 | 31 | 34 | 0 | 11 | 2 | 0 |
| Nebraska | 1 | 0 | 3 | 31 | 0 | 9 | 0 | 0 |
| Kansas | 6 | 4 | 121 | 90 | 2 | 6 | 6 | 7 |
| South Atlantic States: | | | | | | | | |
| Delaware | 0 | 0 | 3 | 19 | 0 | 0 | 3 | 1 |
| Maryland [2] | 1 | 4 | 66 | 93 | 0 | 0 | 8 | 22 |
| District of Columbia | 0 | 1 | 6 | 10 | 0 | 0 | 1 | 1 |
| Virginia | 2 | 2 | 53 | 56 | 0 | 0 | 19 | 25 |
| West Virginia | 6 | 2 | 78 | 146 | 0 | 0 | 7 | 10 |
| North Carolina | 1 | 1 | 81 | 90 | 0 | 2 | 4 | 19 |
| South Carolina [3] | 0 | 0 | 27 | 5 | 0 | 0 | 2 | 8 |
| Georgia [3] | 4 | 1 | 27 | 22 | 0 | 0 | 12 | 4 |
| Florida [3] | 2 | 0 | 6 | 8 | 0 | 0 | 1 | 0 |

See footnotes at end of table.

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Nov. 7, 1936, and Nov. 9, 1935*—Continued

| Division and State | Poliomyelitis | | Scarlet fever | | Smallpox | | Typhoid fever | |
|---|---|---|---|---|---|---|---|---|
| | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 | Week ended Nov. 7, 1936 | Week ended Nov. 9, 1935 |
| East South Central States: | | | | | | | | |
| Kentucky | 1 | 8 | 64 | 84 | 0 | 0 | 20 | 12 |
| Tennessee | 2 | 1 | 37 | 71 | 0 | 0 | 16 | 8 |
| Alabama [3] | 2 | 0 | 21 | 23 | 0 | 0 | 6 | 5 |
| Mississippi | 3 | 0 | 22 | 19 | 0 | 0 | 8 | 5 |
| West South Central States: | | | | | | | | |
| Arkansas | 8 | 1 | 8 | 10 | 0 | 1 | 4 | 4 |
| Louisiana | 0 | 4 | 16 | 17 | 0 | 0 | 8 | 14 |
| Oklahoma [4] | 31 | 1 | 15 | 14 | 7 | 0 | 18 | 15 |
| Texas [3] | 2 | 4 | 22 | 78 | 1 | 0 | 19 | 25 |
| Mountain States: | | | | | | | | |
| Montana | 0 | 0 | 40 | 161 | 5 | 34 | 2 | 0 |
| Idaho | 0 | 0 | 38 | 54 | 0 | 0 | 2 | 7 |
| Wyoming | 0 | 0 | 32 | 16 | 8 | 1 | 0 | 2 |
| Colorado | 10 | 0 | 42 | 106 | 0 | 4 | 0 | 1 |
| New Mexico | 0 | 0 | 25 | 15 | 0 | 0 | 10 | 22 |
| Arizona | 1 | 0 | 6 | 28 | 0 | 0 | 1 | 0 |
| Utah [2] | 0 | 0 | 22 | 69 | 1 | 0 | 0 | 0 |
| Pacific States: | | | | | | | | |
| Washington | 2 | 3 | 28 | 72 | 0 | 25 | 4 | 0 |
| Oregon [5] | 3 | 0 | 32 | 45 | 1 | 0 | 5 | 2 |
| California | 11 | 8 | 180 | 235 | 2 | 0 | 14 | 14 |
| Total | 165 | 155 | 3,207 | 4,519 | 41 | 116 | 328 | 318 |
| First 45 weeks of year | 3,914 | 10,146 | 204,826 | 211,936 | 6,531 | 5,874 | 13,021 | 15,996 |

[1] New York City only.
[2] Week ended earlier than Saturday.
[3] Typhus fever, week ended Nov. 7, 1936, 33 cases, as follows: South Carolina, 2; Georgia, 12; Florida, 1; Alabama, 12; Texas, 6.
[4] Exclusive of Oklahoma City and Tulsa.
[5] Rocky Mountain spotted fever, week ended Nov. 7, 1936, Oregon, 1 case.

## SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week:

| State | Meningococcus meningitis | Diphtheria | Influenza | Malaria | Measles | Pellagra | Poliomyelitis | Scarlet fever | Smallpox | Typhoid fever |
|---|---|---|---|---|---|---|---|---|---|---|
| *July 1936* | | | | | | | | | | |
| New Hampshire | | 3 | | | | | 1 | 6 | 0 | 0 |
| *September 1936* | | | | | | | | | | |
| Hawaii Territory | 1 | 1 | 14 | | 4 | | 1 | | 0 | 1 |
| New Hampshire | | 1 | | | | | 0 | 14 | 0 | 0 |
| *October 1936* | | | | | | | | | | |
| Arkansas | 1 | 34 | 34 | 90 | 1 | 3 | 14 | 18 | 0 | 23 |
| Connecticut | 1 | 9 | 8 | 2 | 34 | | 4 | 101 | 0 | 8 |
| Delaware | | 6 | 7 | 2 | 15 | | 0 | 13 | 0 | 12 |
| District of Columbia | 8 | 71 | 8 | | 20 | 1 | 2 | 42 | 0 | 7 |
| Florida | 8 | 43 | 15 | 140 | 3 | 5 | 6 | 24 | 0 | 5 |
| Maine | 2 | 11 | 2 | [1] 1 | 50 | | 4 | 59 | 0 | 6 |
| North Carolina | 9 | 685 | 24 | | 37 | 47 | 5 | 330 | 1 | 59 |
| South Carolina | | 344 | 579 | 2,246 | 19 | 76 | 7 | 43 | 0 | 53 |

[1] Imported.

*September 1936*

| | Cases |
|---|---|
| Hawaii Territory: | |
| Chicken pox | 4 |
| Dysentery (amoebic) | 1 |
| Leprosy | 4 |
| Mumps | 45 |
| Typhus fever | 6 |
| Whooping cough | 7 |

*October 1936*

| | Cases |
|---|---|
| Chicken pox: | |
| Arkansas | 2 |
| Connecticut | 175 |
| Delaware | 19 |
| District of Columbia | 12 |
| Florida | 3 |
| Maine | 108 |
| North Carolina | 72 |
| South Carolina | 9 |
| Conjunctivitis, infectious: | |
| Connecticut | 2 |
| Dengue: | |
| Arkansas | 1 |
| South Carolina | 2 |
| Diarrhea: | |
| South Carolina | 373 |
| Dysentery: | |
| Connecticut (amoebic) | 2 |
| Connecticut (bacillary) | 14 |
| Delaware | 4 |
| Florida | 2 |

*October 1936*—Continued

| | Cases |
|---|---|
| German measles: | |
| Connecticut | 11 |
| Delaware | 1 |
| Maine | 8 |
| North Carolina | 13 |
| Hookworm disease: | |
| South Carolina | 121 |
| Impetigo contagiosa: | |
| Delaware | 2 |
| Mumps: | |
| Arkansas | 15 |
| Connecticut | 149 |
| Delaware | 2 |
| Florida | 36 |
| Maine | 273 |
| South Carolina | 33 |
| Ophthalmia neonatorum: | |
| Connecticut | 1 |
| North Carolina | 1 |
| South Carolina | 5 |
| Paratyphoid fever: | |
| Connecticut | 11 |
| North Carolina | 2 |
| South Carolina | 2 |
| Rabies in animals: | |
| Connecticut | 1 |
| South Carolina | 29 |
| Rabies in man: | |
| North Carolina | 1 |
| Rocky Mountain spotted fever: | |
| North Carolina | 1 |

*October 1936*—Continued

| | Cases |
|---|---|
| Scabies: | |
| Delaware | 1 |
| Septic sore throat: | |
| Connecticut | 5 |
| Maine | 7 |
| North Carolina | 25 |
| Trachoma: | |
| Connecticut | 1 |
| Typhus fever: | |
| Florida | 3 |
| North Carolina | 6 |
| South Carolina | 13 |
| Undulant fever: | |
| Arkansas | 3 |
| Connecticut | 11 |
| Florida | 1 |
| Maine | 2 |
| North Carolina | 1 |
| South Carolina | 1 |
| Vincent's infection: | |
| Maine | 8 |
| Whooping cough: | |
| Arkansas | 5 |
| Connecticut | 271 |
| Delaware | 22 |
| District of Columbia | 92 |
| Florida | 14 |
| Maine | 113 |
| North Carolina | 168 |
| South Carolina | 67 |

## WEEKLY REPORTS FROM CITIES

### *City reports for week ended Oct. 31, 1936*

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference.

| State and city | Diphtheria, cases | Influenza | | Measles, cases | Pneumonia, deaths | Scarlet fever, cases | Smallpox, cases | Tuberculosis, deaths | Typhoid fever, cases | Whooping cough, cases | Deaths, all causes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cases | Deaths | | | | | | | | |
| Maine: | | | | | | | | | | | |
| Portland | 0 | | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 29 |
| New Hampshire: | | | | | | | | | | | |
| Concord | 0 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 16 |
| Nashua | 0 | | | 0 | | 1 | 0 | | 0 | 0 | |
| Vermont: | | | | | | | | | | | |
| Barre | | | | | | | | | | | |
| Burlington | 6 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Rutland | 0 | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| Massachusetts: | | | | | | | | | | | |
| Boston | 1 | | 0 | 2 | 9 | 24 | 0 | 5 | 0 | 112 | 222 |
| Fall River | 0 | | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 25 |
| Springfield | 0 | | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 1 | 42 |
| Worcester | 0 | | 0 | 4 | 6 | 7 | 0 | 1 | 0 | 4 | 45 |
| Rhode Island: | | | | | | | | | | | |
| Pawtucket | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Providence | 1 | | 0 | 0 | 5 | 7 | 0 | 1 | 0 | 10 | 67 |
| Connecticut: | | | | | | | | | | | |
| Bridgeport | 0 | | 0 | 6 | 1 | 0 | 0 | 1 | 0 | 4 | 17 |
| Hartford | 0 | | 0 | 1 | 0 | 5 | 0 | 0 | 1 | 7 | 35 |
| New Haven | 0 | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 31 |
| New York: | | | | | | | | | | | |
| Buffalo | 2 | | 0 | 7 | 10 | 12 | 0 | 6 | 0 | 8 | 131 |
| New York | 18 | 10 | 1 | 27 | 81 | 45 | 0 | 72 | 14 | 94 | 1,356 |
| Rochester | 0 | | 0 | 1 | 4 | 4 | 0 | 2 | 0 | 4 | 56 |
| Syracuse | 0 | | 0 | 0 | 2 | 7 | 0 | 1 | 0 | 19 | 38 |
| New Jersey: | | | | | | | | | | | |
| Camden | 1 | 1 | 0 | 0 | 1 | 3 | 0 | 1 | 0 | 1 | 30 |
| Newark | 0 | 5 | 0 | 0 | 8 | 2 | 0 | 5 | 0 | 40 | 100 |
| Trenton | 0 | | 0 | 0 | 3 | 0 | 0 | 1 | 1 | 0 | 36 |
| Pennsylvania: | | | | | | | | | | | |
| Philadelphia | 8 | | 3 | 1 | 27 | 36 | 0 | 23 | 5 | 98 | 480 |
| Pittsburgh | 0 | 5 | 3 | 0 | 22 | 23 | 0 | 7 | 1 | 21 | 137 |
| Reading | 0 | | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 45 | 32 |
| Scranton | 0 | | | 0 | | 0 | 0 | | 0 | 0 | |

*City reports for week ended Oct. 31, 1936*—Continued

| State and city | Diphtheria, cases | Influenza | | Measles, cases | Pneumonia, deaths | Scarlet fever, cases | Smallpox, cases | Tuberculosis, deaths | Typhoid fever, cases | Whooping cough, cases | Deaths, all causes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cases | Deaths | | | | | | | | |
| Ohio: | | | | | | | | | | | |
| Cincinnati | 4 | | 2 | 1 | 8 | 5 | 0 | 6 | 1 | 11 | 119 |
| Cleveland | 7 | 9 | 2 | 2 | 11 | 24 | 0 | 10 | 2 | 23 | 184 |
| Columbus | 5 | | 0 | 0 | 5 | 8 | 0 | 1 | 0 | 6 | 77 |
| Toledo | 0 | | 0 | 0 | 4 | 1 | 0 | 2 | 3 | 14 | 77 |
| Indiana: | | | | | | | | | | | |
| Anderson | 0 | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| Fort Wayne | 0 | | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 18 |
| Indianapolis | 3 | | 1 | 2 | 6 | 12 | 0 | 3 | 0 | 4 | 111 |
| Muncie | 0 | | 0 | 0 | 3 | 4 | 0 | 1 | 0 | 0 | 13 |
| South Bend | 0 | | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 16 |
| Terre Haute | 0 | | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 15 |
| Illinois: | | | | | | | | | | | |
| Alton | 0 | | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 7 |
| Chicago | 10 | 5 | 3 | 3 | 23 | 95 | 0 | 40 | 6 | 41 | 635 |
| Elgin | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 10 |
| Moline | 0 | | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 6 |
| Springfield | 0 | | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 6 | 23 |
| Michigan: | | | | | | | | | | | |
| Detroit | 14 | 1 | 0 | 2 | 26 | 69 | 0 | 16 | 0 | 50 | 272 |
| Flint | 1 | | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 4 | 22 |
| Grand Rapids | 0 | | 0 | 2 | 1 | 5 | 0 | 0 | 0 | 8 | 23 |
| Wisconsin: | | | | | | | | | | | |
| Kenosha | 0 | | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 8 |
| Madison | 0 | | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 8 | 19 |
| Milwaukee | 1 | 1 | 1 | 0 | 3 | 32 | 1 | 5 | 0 | 23 | 87 |
| Racine | 0 | | 0 | 0 | 2 | 10 | 0 | 1 | 0 | 0 | 11 |
| Superior | 0 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| Minnesota: | | | | | | | | | | | |
| Duluth | 0 | | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 2 | 26 |
| Minneapolis | 13 | | 2 | 4 | 3 | 14 | 0 | 1 | 0 | 13 | 115 |
| St. Paul | 0 | 1 | 1 | 2 | 9 | 6 | 0 | 2 | 0 | 14 | 57 |
| Iowa: | | | | | | | | | | | |
| Cedar Rapids | 0 | | | 0 | | 4 | 0 | | 0 | 0 | |
| Davenport | 1 | | | 0 | | 0 | 0 | | 0 | 0 | |
| Des Moines | 0 | | | 0 | | 1 | 0 | | 0 | 1 | 28 |
| Sioux City | 0 | | | 0 | | 5 | 1 | | 0 | 3 | |
| Waterloo | 2 | | | 0 | | 7 | 0 | | 0 | 18 | |
| Missouri: | | | | | | | | | | | |
| Kansas City | 3 | | 1 | 0 | 12 | 26 | 0 | 3 | 0 | 0 | 102 |
| St. Joseph | | | | | | | | | | | |
| St. Louis | 5 | 1 | 0 | 1 | 6 | 15 | 0 | 9 | 2 | 11 | 237 |
| North Dakota: | | | | | | | | | | | |
| Fargo | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Grand Forks | 0 | | | 0 | | 0 | 0 | | 0 | 0 | |
| Minot | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| South Dakota: | | | | | | | | | | | |
| Aberdeen | 0 | | | 0 | | 6 | 0 | | 0 | 0 | |
| Nebraska: | | | | | | | | | | | |
| Omaha | 0 | | 1 | 1 | 6 | 2 | 0 | 2 | 0 | 2 | 54 |
| Kansas: | | | | | | | | | | | |
| Lawrence | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Topeka | | | | | | | | | | | |
| Wichita | 1 | | 0 | 0 | 8 | 10 | 0 | 1 | 0 | 1 | 37 |
| Delaware: | | | | | | | | | | | |
| Wilmington | 0 | | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 19 |
| Maryland: | | | | | | | | | | | |
| Baltimore | 6 | 6 | 2 | 10 | 17 | 20 | 0 | 10 | 1 | 105 | 221 |
| Cumberland | 0 | | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 12 |
| Frederick | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Dist. of Col.: | | | | | | | | | | | |
| Washington | 9 | | 0 | 4 | 16 | 15 | 0 | 10 | 0 | 17 | 147 |
| Virginia: | | | | | | | | | | | |
| Lynchburg | 0 | | 0 | 0 | 1 | 3 | 0 | 2 | 0 | 3 | 10 |
| Norfolk | 0 | | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 19 |
| Richmond | 0 | | 0 | 0 | 3 | 7 | 0 | 0 | 1 | 3 | 50 |
| Roanoke | 1 | | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 20 |
| West Virginia: | | | | | | | | | | | |
| Charleston | 0 | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 12 |
| Huntington | 4 | | | 0 | | 5 | 0 | | 0 | 0 | |
| Wheeling | 0 | | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 18 |
| North Carolina: | | | | | | | | | | | |
| Gastonia | 1 | | | 0 | | 1 | 0 | | 0 | 0 | |
| Raleigh | | | | | | | | | | | |
| Wilmington | 4 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 8 |
| Winston-Salem | 0 | | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 23 |

*City reports for week ended Oct. 31, 1936*—Continued

| State and city | Diphtheria, cases | Influenza Cases | Influenza Deaths | Measles, cases | Pneumonia, deaths | Scarlet fever, cases | Smallpox, cases | Tuberculosis, deaths | Typhoid fever, cases | Whooping cough, cases | Deaths, all causes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **South Carolina:** | | | | | | | | | | | |
| Charleston | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Columbia | 0 | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 24 |
| Florence | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Greenville | 3 | | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 11 |
| **Georgia:** | | | | | | | | | | | |
| Atlanta | 3 | 5 | 2 | 1 | 10 | 8 | 0 | 1 | 1 | 0 | 72 |
| Brunswick | 0 | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Savannah | 1 | | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 37 |
| **Florida:** | | | | | | | | | | | |
| Miami | 1 | 3 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 26 |
| Tampa | 0 | | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 22 |
| **Kentucky:** | | | | | | | | | | | |
| Ashland | | | | | | | | | | | |
| Covington | 0 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 13 |
| Lexington | 0 | | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 23 |
| **Tennessee:** | | | | | | | | | | | |
| Knoxville | 7 | | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 28 |
| Memphis | 3 | | 2 | 0 | 3 | 7 | 0 | 4 | 3 | 7 | 73 |
| Nashville | 4 | | 0 | 0 | 2 | 0 | 0 | 4 | 1 | 0 | 51 |
| **Alabama:** | | | | | | | | | | | |
| Birmingham | 4 | | 1 | 1 | 6 | 2 | 0 | 7 | 1 | 0 | 80 |
| Mobile | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 23 |
| Montgomery | 5 | | | 0 | | 0 | 0 | | 1 | 0 | |
| **Arkansas:** | | | | | | | | | | | |
| Fort Smith | 0 | | | 0 | | 2 | 0 | | 0 | 0 | |
| Little Rock | 0 | | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | |
| **Louisiana:** | | | | | | | | | | | |
| Lake Charles | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| New Orleans | 3 | 3 | 0 | 0 | 4 | 1 | 0 | 6 | 0 | 1 | 150 |
| Shreveport | 8 | | 0 | 1 | 7 | 6 | 0 | 4 | 3 | 0 | 51 |
| **Oklahoma:** | | | | | | | | | | | |
| Oklahoma City | 1 | | 0 | 0 | 9 | 2 | 0 | 1 | 0 | 0 | 40 |
| Tulsa | 0 | | | 0 | | 7 | 0 | | 1 | 0 | |
| **Texas:** | | | | | | | | | | | |
| Dallas | 4 | 2 | 2 | 0 | 9 | 3 | 0 | 3 | 0 | 0 | 75 |
| Fort Worth | 0 | | 1 | 0 | 4 | 6 | 0 | 1 | 2 | 0 | 36 |
| Galveston | 0 | | 0 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 18 |
| Houston | 6 | | 0 | 0 | 11 | 3 | 0 | 2 | 0 | 0 | 77 |
| San Antonio | 1 | | 1 | 0 | 10 | 0 | 0 | 8 | 0 | 0 | 67 |
| **Montana:** | | | | | | | | | | | |
| Billings | 1 | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| Great Falls | 0 | | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 8 |
| Helena | 0 | | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 1 |
| Missoula | 0 | | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 11 |
| **Idaho:** | | | | | | | | | | | |
| Boise | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 |
| **Colorado:** | | | | | | | | | | | |
| Colorado Springs | 1 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| Denver | 6 | | 1 | 0 | 9 | 10 | 0 | 3 | 0 | 26 | 76 |
| Pueblo | 0 | | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 12 |
| **New Mexico:** | | | | | | | | | | | |
| Albuquerque | 0 | | 0 | 0 | 2 | 8 | 0 | 1 | 0 | 0 | 15 |
| **Utah:** | | | | | | | | | | | |
| Salt Lake City | 0 | | 0 | 1 | 2 | 7 | 0 | 2 | 0 | 1 | 31 |
| **Nevada:** | | | | | | | | | | | |
| Reno | | | | | | | | | | | |
| **Washington:** | | | | | | | | | | | |
| Seattle | 1 | | 0 | 4 | 3 | 3 | 0 | 2 | 0 | 6 | 90 |
| Spokane | 0 | 1 | 1 | 1 | 3 | 12 | 0 | 0 | 0 | 4 | 34 |
| Tacoma | 0 | | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 28 |
| **Oregon:** | | | | | | | | | | | |
| Portland | 0 | | 0 | 1 | 2 | 5 | 0 | 0 | 2 | 2 | 69 |
| Salem | 0 | 3 | | 0 | | 1 | 0 | | 0 | 0 | |
| **California:** | | | | | | | | | | | |
| Los Angeles | 13 | 9 | 1 | 7 | 15 | 21 | 0 | 16 | 2 | 63 | 283 |
| Sacramento | 2 | | 0 | 3 | 0 | 35 | 0 | 5 | 0 | 1 | 32 |
| San Francisco | 1 | | 0 | 0 | 5 | 15 | 0 | 9 | 0 | 25 | 167 |

*City reports for week ended Oct. 31, 1936*—Continued

| State and city | Meningococcus meningitis | | Polio-myelitis cases | State and city | Meningococcus meningitis | | Polio-myelitis cases |
|---|---|---|---|---|---|---|---|
| | Cases | Deaths | | | Cases | Deaths | |
| **New Hampshire:** | | | | Virginia: | | | |
| Concord | 0 | 0 | 1 | Roanoke | 0 | 1 | 0 |
| **Massachusetts:** | | | | West Virginia: | | | |
| Boston | 0 | 1 | 1 | Charleston | 0 | 0 | 1 |
| **Rhode Island:** | | | | Georgia: | | | |
| Providence | 0 | 1 | 0 | Atlanta | 3 | 0 | 1 |
| New York: | | | | Florida: | | | |
| Buffalo | 0 | 1 | 0 | Tampa | 0 | 0 | 1 |
| New York | 5 | 3 | 1 | Kentucky: | | | |
| Syracuse | 0 | 0 | 1 | Lexington | 1 | 1 | 0 |
| New Jersey: | | | | Tennessee: | | | |
| Newark | 0 | 0 | 1 | Knoxville | 0 | 0 | 1 |
| Pennsylvania: | | | | Memphis | 2 | 0 | 4 |
| Philadelphia | 1 | 0 | 2 | Arkansas: | | | |
| Pittsburgh | 1 | 1 | 0 | Fort Smith | 0 | 0 | 1 |
| Ohio: | | | | Louisiana: | | | |
| Cincinnati | 1 | 0 | 0 | New Orleans | 1 | 0 | 0 |
| Cleveland | 0 | 0 | 1 | Oklahoma: | | | |
| Columbus | 0 | 0 | 1 | Oklahoma City | 3 | 0 | 0 |
| Toledo | 0 | 1 | 4 | Tulsa | 0 | 0 | 5 |
| Indiana: | | | | Montana: | | | |
| Fort Wayne | 0 | 0 | 1 | Missoula | 1 | 0 | 0 |
| Muncie | 1 | 1 | 0 | Colorado: | | | |
| Illinois: | | | | Denver | 0 | 1 | 0 |
| Chicago | 4 | 0 | 10 | Pueblo | 0 | 0 | 2 |
| Michigan: | | | | Utah: | | | |
| Detroit | 1 | 0 | 1 | Salt Lake City | 1 | 0 | 0 |
| Wisconsin: | | | | Washington: | | | |
| Milwaukee | 3 | 1 | 0 | Spokane | 1 | 0 | 0 |
| North Dakota: | | | | Oregon: | | | |
| Minot | 0 | 0 | 1 | Portland | 0 | 0 | 1 |
| Maryland: | | | | California: | | | |
| Baltimore | 5 | 1 | 0 | Los Angeles | 1 | 0 | 1 |
| District of Columbia: | | | | San Francisco | 0 | 0 | 1 |
| Washington | 4 | 2 | 0 | | | | |

*Epidemic encephalitis.*—Cases: Oklahoma City, 1.
*Pellagra.*—Cases: Wilmington, N. C., 1; Savannah, 1; New Orleans, 1; San Francisco, 4.
*Rabies in man.*—Deaths: Mobile, 1.
*Typhus fever.*—Cases: New York, 2; Charleston, S. C., 1; Savannah, 2; Tampa, 1; Montgomery, 1.

# FOREIGN AND INSULAR

## CUBA

*Provinces—Notifiable diseases—4 weeks ended October 17, 1936.*—During the 4 weeks ended October 17, 1936, cases of certain notifiable diseases were reported in the Provinces of Cuba as follows:

| Disease | Pinar del Rio | Habana | Matanzas | Santa Clara | Camaguey | Oriente | Total |
|---|---|---|---|---|---|---|---|
| Cancer | 1 | 2 | | 4 | 1 | 5 | 13 |
| Chicken pox | | | | | 1 | 4 | 5 |
| Diphtheria | 2 | 5 | | 3 | 4 | 2 | 16 |
| Hookworm disease | | | | 1 | | | 1 |
| Leprosy | 1 | 9 | 1 | | 2 | | 13 |
| Malaria | 295 | 134 | 56 | 549 | 254 | 534 | 1,822 |
| Poliomyelitis | | 2 | 1 | | | | 3 |
| Scarlet fever | | 1 | | 3 | | | 3 |
| Tuberculosis | 16 | 21 | 15 | 41 | 18 | 30 | 141 |
| Typhoid fever | 15 | 54 | 14 | 31 | 10 | 30 | 154 |

## CZECHOSLOVAKIA

*Communicable diseases—August 1936.*—During the month of August 1936, certain communicable diseases were reported in Czechoslovakia as follows:

| Disease | Cases | Deaths | Disease | Cases | Deaths |
|---|---|---|---|---|---|
| Anthrax | 22 | 2 | Paratyphoid fever | 31 | 3 |
| Cerebrospinal meningitis | 10 | 4 | Poliomyelitis | 43 | 6 |
| Chicken pox | 25 | | Puerperal fever | 23 | 6 |
| Diphtheria | 1,549 | 90 | Scarlet fever | 1,627 | 28 |
| Dysentery | 232 | 38 | Trachoma | 41 | |
| Influenza | 13 | | Typhoid fever | 935 | 52 |
| Malaria | 361 | 1 | Typhus fever | 1 | |

## LATVIA

*Communicable diseases—July–September 1936.*—During the months of July, August, and September 1936, cases of certain communicable diseases were reported in Latvia as follows:

| Disease | July | August | September | Disease | July | August | September |
|---|---|---|---|---|---|---|---|
| Botulism | 1 | | 2 | Mumps | 1 | 6 | 3 |
| Cerebrospinal meningitis | 10 | | 4 | Paratyphoid fever | 13 | 14 | 6 |
| Diphtheria | 47 | 45 | 40 | Poliomyelitis | 2 | 3 | 2 |
| Dysentery | 1 | 2 | | Puerperal septicemia | 4 | 13 | 6 |
| Erysipelas | 33 | 30 | 37 | Scarlet fever | 97 | 94 | 136 |
| Influenza | 34 | 39 | 53 | Tetanus | 1 | 1 | 6 |
| Leprosy | 4 | | | Trachoma | 52 | 37 | 25 |
| Lethargic encephalitis | | | 2 | Tuberculosis | 377 | 274 | 285 |
| Malaria | | 1 | | Typhoid fever | 49 | 76 | 81 |
| Measles | 113 | 20 | 3 | Whooping cough | 43 | 36 | 14 |

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for October 30, 1936, pages 1518-31. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued November 27, 1936, and thereafter, at least for the time being, in the issue published on the last Friday of each month.

### Plague

*Egypt—Girga Province.*—During the week ended October 31, 1936, 1 fatal case of plague was reported in Girga Province, Egypt.

*Iraq—Baghdad Province.*—During the week ended October 31, 1936, 1 case of plague was reported in Baghdad Province, Iraq.

### Smallpox

*Argentina.*—During the month of October 1936, smallpox was reported in Argentina as follows: Corrientes Province, 1 case; Entre Rios Province, 153 cases, 9 deaths; Los Andes Territory, 12 cases; Salta Province, 31 cases, 18 deaths.

*Brazil—Bahia.*—During the week ended August 29, 1936, 11 cases of smallpox with 2 deaths were reported in Bahia, Brazil.

### Yellow Fever

*Colombia.*—Yellow fever has been reported in Colombia as follows: July 23, 1936, 1 death at Restrepo; July 12, 1 death at Santander Department; September 15, 1 death in Villavicencio.

*Sudan (French)—Banankoro Circle—Segou.*—On October 30, 1936, 1 fatal case of yellow fever was reported in Segou, Banankoro Circle, French Sudan.

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