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

November 29–December 26, 1936

The prevalence of certain important communicable diseases, as indicated by weekly telegraphic reports from State health departments to the United States Public Health Service, is summarized in this report. The underlying statistical data are published weekly in the Public Health Reports, under the section entitled "Prevalence of Disease."

Influenza.—Reported cases of influenza show a considerable increase for the week ended January 2, 1937; the West South Central, Mountain, West North Central, East North Central, and Middle Atlantic sections reported approximately 10 times as many cases as for the corresponding weeks of 1932 or 1934 (table 1), two winters of fairly average influenza incidence. With the exception of the West South Central section, these areas did not show a decided increase in reported cases during December. Texas, however, in the West South Central section has reported slightly more than the average number of cases for 5 weeks; that is, from November 29, 1936, to January 2, 1937. The largest number of cases reported in Texas was for the week ended December 26, a somewhat smaller number being reported for the week ended January 2. The New England, South Atlantic, and Pacific Coast States show only an average number of cases for this season of the year. California, which had an unusual flurry of cases in the early summer—that is, during the 5 weeks from May 31 to July 4, 1936—has shown only the seasonal expectancy during the fall and early winter. In the country as a whole there has not been an alarming number of cases of influenza reported, though from December 13 to January 2 the number has been in excess of the average, and during the last week for which reports are available, that ended January 2, the area reporting an excess of cases has spread from the West South Central to the Mountain and to the West North Central, East North Central, and Middle Atlantic areas.

[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.

Mortality from all causes in 95 large cities during the week ended January 2, 1937, shows a marked increase over normal expectancy, 14.5 per 1,000 in 1937 as compared with 13.0 for the same week of 1934. New York and Chicago had similar high rates for the same week.

Cases of influenza reported in each geographic area from Nov. 1, 1936, to Jan. 2, 1937

Region	Week ended—								
	Nov. 7	Nov. 14	Nov. 21	Nov. 28	Dec. 5	Dec. 12	Dec. 19	Dec. 26	Jan. 2
All regions:[1]									
1936–37	717	970	913	1,050	1,701	1,971	2,225	2,088	3,993
1933–34 [2]	999	1,009	1,107	1,481	1,431	1,311	1,105	1,158	2,051
1931–32 [2]	1,046	868	819	851	987	873	602	1,092	1,211
New England:									
1936–37	3	6	4	10	4	2	10	10	21
1933–34	2	4	19	6	16	19	16	23	35
1931–32	8	18	3	17	11	24	15	20	25
Middle Atlantic:									
1936–37	26	13	30	25	19	44	43	46	513
1933–34	38	30	40	49	44	58	38	32	48
1931–32	22	18	27	29	22	21	20	32	51
East North Central:									
1936–37	54	97	55	59	90	129	249	331	1,001
1933–34	189	82	86	246	100	194	110	204	143
1931–32	52	25	52	21	125	13	25	76	80
West North Central:									
1936–37	51	72	59	143	71	60	97	80	263
1933–34	9	22	17	9	14	10	11	15	27
1931–32	322	7	21	10	8	9	9	10	20
South Atlantic:									
1936–37	226	335	364	258	424	509	706	368	621
1933–34	418	451	484	673	689	511	547	403	1,102
1931–32	461	569	544	540	530	507	322	540	596
East South Central:									
1936–37	92	94	96	184	165	311	207	113	286
1933–34	86	71	100	137	142	185	85	82	168
1931–32	60	73	50	35	58	44	52	101	99
West South Central:									
1936–37	159	185	191	209	729	663	652	896	503
1933–34	188	248	189	224	299	239	186	292	400
1931–32	36	46	41	82	99	81	41	77	157
Mountain:									
1936–37	57	67	31	64	75	78	164	124	692
1933–34	23	24	81	66	62	27	65	48	38
1931–32	9	12	15	15	11	13	5	10	25
Pacific:									
1936–37	49	51	83	98	124	175	97	70	93
1933–34	46	77	91	71	65	68	47	59	90
1931–32	76	100	66	102	123	161	113	226	168

[1] No reports were received from Mississippi, Nevada, up-State New York, Pennsylvania, or Virginia.
[2] Reported cases for the corresponding weeks of 1933–34 and 1931–32, 2 winters of average influenza incidence.

Poliomyelitis.—For the 4 weeks ended December 26, 1936, there were 201 cases of poliomyelitis reported, as compared with 232, 185, and 136 for the corresponding period in the years 1935, 1934, and 1933, respectively. All sections of the country reported the usual seasonal decline, but in the North and South Central regions, where the disease was most prevalent during the rise of the summer of 1936, the numbers of cases were still slightly above those of last year. Other regions reported about the expected incidence.

Measles.—The reported incidence of measles, 6,801 cases, is low as compared with recent years. For this period in the 3 preceding years the numbers of cases totaled approximately 10,000, 20,000, and 30,000 for 1935, 1934, and 1933, respectively. In the South Atlantic

and South Central regions the disease appeared to be slightly more prevalent than it was at this time last year, but all other regions reported fewer cases. The recorded number of cases of measles remained at a very low level during 1936.

Scarlet fever.—For the country as a whole, the incidence of scarlet fever for the 4-week period under report was about 70 percent of that reported for the corresponding period in 1935, a year in which the disease was unusually high. The number of cases for this period, 17,630, was about the average for the 6 preceding years. In the North Atlantic regions the number of cases was somewhat lower than the seasonal expectancy while in the West North Central region, where a large number of cases have been continually reported during the past 2 years, the incidence is still high in relation to more normal years. Other regions reported about the normal incidence.

Smallpox.—The number of cases of smallpox rose from 333 for the preceding 4 weeks to 636 for the current 4-week period. The incidence was only about 80 percent of that for the corresponding period in 1935, but it was more than 25 percent in excess of the incidence during this period in each of the 3 preceding years. With the exception of 67 cases in New York, the increases occurred in practically the same States of the North Central, Mountain, and Pacific regions in which the disease has been continuously prevalent for the past 2 years. Oregon reported 113 cases; Montana, 87; South Dakota, 45; Iowa and North Dakota, 43 each; Wisconsin, 37; and Kansas, 36. More than three-fourths of the total cases occurred in those States.

Typhoid fever.—The number of reported cases of typhoid fever for the current period was 754, approximately the same as was reported for the corresponding period in 1935. In 1934, 1933, and 1932 the numbers of cases for this period were 1,039, 995, and 680, respectively. The situation was very favorable in all sections of the country. Slight increases over last year were reported from the North Central regions, but in the South Central regions the disease was less prevalent than at this time last year, and in the other regions it stood at about last year's level.

Diphtheria.—Diphtheria again registered a record low level. The 3,031 cases reported for the current 4 weeks was the lowest recorded for this period in the 8 years for which these data are available. The current incidence compares with a total of 8,154 for this period in 1929 and 7,246 for the same period in 1931. A comparison of geographic regions shows an increase in the South Atlantic region over each of the 2 preceding years, while in the Mountain and Pacific regions the current incidence was the highest in 3 years. Other regions continued to report the lowest incidence in recent years.

Meningococcus meningitis.—For the 4 weeks ended December 26, 1936, there were 405 cases of meningococcus meningitis reported, repre-

senting a decline of less than 10 percent from the incidence for the corresponding period in 1935. This disease has stood at a relatively high level since the beginning of 1935, and while the cases during the latter part of the current year have dropped below those of last year they are still the highest since the epidemics of 1929 and 1930. In 1929 and 1930 the numbers of cases for this period were 699 and 372, respectively. Regions along the Atlantic coast and the Mountain and Pacific regions reported excesses in the current period over last year; the South Central and West North Central regions reported fewer cases, and in the East North Central approximately the same incidence was recorded as that for last year.

Deaths, all causes.—The average mortality rate from all causes in large cities as reported by the Bureau of the Census for the 4 weeks ended December 26, 1936, was 12.3 per 1,000 inhabitants (annual basis). The rates for the corresponding period in the years 1935, 1934, and 1933 were 12.3, 12.2, and 12.1, respectively. By weeks for the current period the rates were 12.2, 12.3, 12.9, and 11.9, respectively.

DISTRIBUTION OF TUBERCULOSIS MORTALITY IN THE WHITE POPULATION OF THE UNITED STATES

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About two years ago a study of tuberculosis mortality by counties in southeastern United States was undertaken. One report on that study has been published [1] and another is now in press.[2] By request of some individuals interested in the epidemiology of tuberculosis, and with the aid of a grant from the National Tuberculosis Association, the study of mortality by counties has been continued. This paper, which is a preliminary report of the study, presents briefly the distribution of tuberculosis mortality in the white population for the entire country from 1929 to 1934.

The data on mortality by counties were secured from three sources. In approximately one-half of the States, the State bureaus of vital statistics cooperated by furnishing data by counties in which white and colored deaths were tabulated separately. The State tuberculosis association rendered valuable assistance in collecting data in two States. The remainder of the figures were taken from tabulations made by the division of vital statistics of the Bureau of the Census in Washington, D. C. Acknowledgment is given here to all who contributed information or made available the data necessary for the purpose of this study.

[1] Some features of tuberculosis mortality distribution in the United States. By L. L. Lumsden and C. C. Dauer. Public Health Bulletin No. 225. Government Printing Office, Washington, D. C., 1936.

[2] The distribution of tuberculous mortality in southeastern United States. By C. C. Dauer and L. L. Lumsden. American Review of Tuberculosis. (In press.)

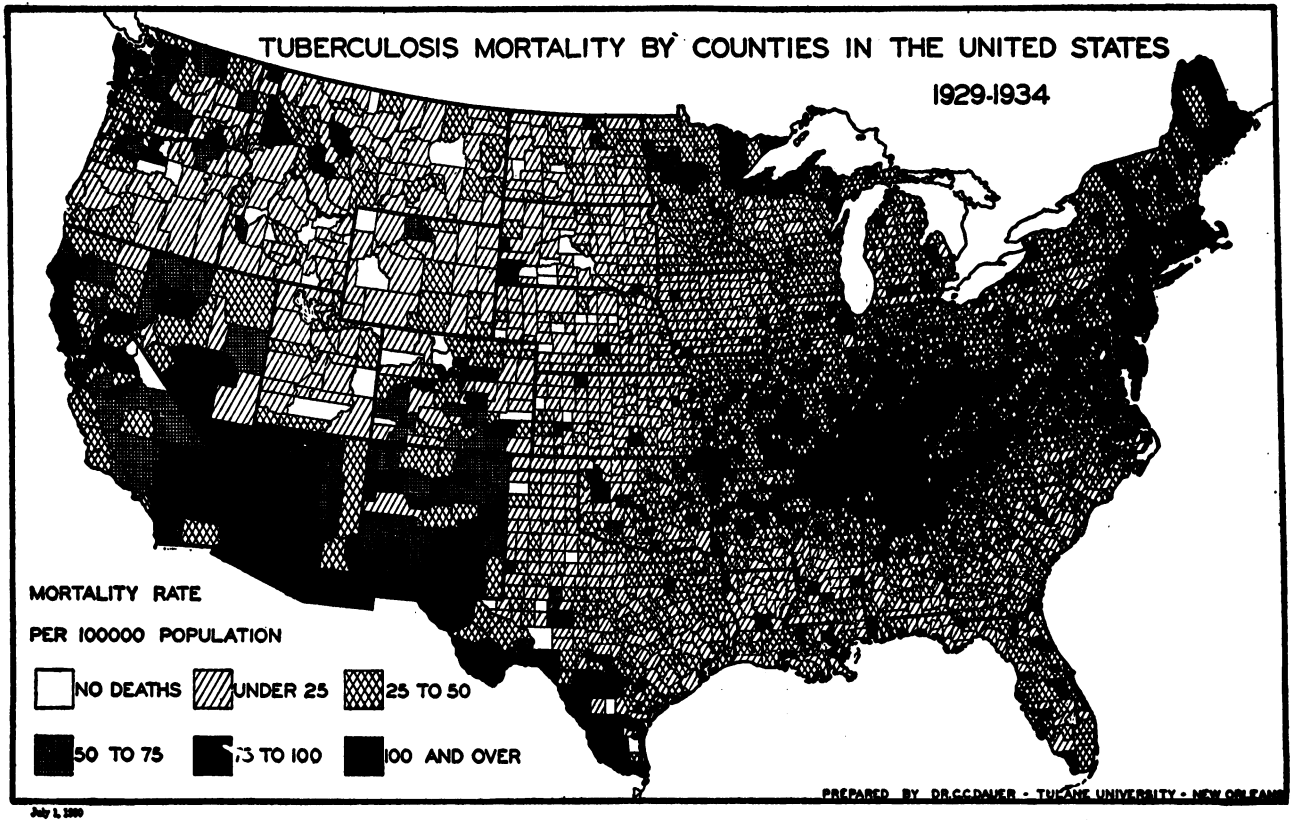
The map which accompanies this report is a graphic presentation of the data assembled. It shows the distribution of mortality from tuberculosis by counties for the white population. The study of the distribution of mortality for the colored population has not been extended to include the entire country, since only in the southeastern section of the country is the concentration of colored persons sufficient to give a fairly accurate picture of the distribution of tuberculosis death rates in that group. The distribution among colored persons in southeastern United States was presented in a previous report.[3]

TABLE 1.—*States in which all tuberculosis deaths in colored persons were excluded, and States in which tuberculosis deaths in colored persons were excluded in counties having 10 percent or more of colored population in 1930*

All tuberculosis deaths in colored persons excluded	Tuberculosis deaths in colored persons excluded in counties with 10 percent or more of colored population.
Alabama.	California.
Arkansas.	Colorado.
Arizona.	Connecticut.
Delaware.	Indiana.
Florida.	Iowa.
Georgia.	Maine.
Idaho.	Massachusetts.
Illinois.	Michigan.
Kansas.	Missouri.
Kentucky.	Montana.
Louisiana.	Nebraska.
Maryland.	Nevada.
Minnesota.	New Hampshire.
Mississippi.	New York.
New Jersey.	North Dakota.
New Mexico.	Oklahoma.
North Carolina.	Oregon.
Ohio.	Pennsylvania.
Rhode Island.	Utah.
South Carolina.	Vermont.
South Dakota.	Washington.
Tennessee.	West Virginia.
Texas.	Wyoming.
Virginia.	
Wisconsin.	

In compiling the data on tuberculosis deaths it was possible to exclude all but a few deaths among colored persons. All deaths in the colored population were excluded for 25 States, as indicated in table 1. For the remaining States they were separated for all counties having 10 percent or more of colored population in 1930. A considerable number were also excluded where data for large cities were available by color but not for the county as a whole. It is felt that the deaths for colored which could not be excluded were in no instance sufficiently large in number to change materially the general picture of the distribution as shown on the map.

[3] Public Health Bulletin No. 225.



Map showing tuberculosis mortality by counties in the white population of the United States, 1929–1934

Whenever possible the number of deaths corrected for residence of the decedents was used, and then only if the figures for a full 5-year period were available.[4] The consequence is that in most States, as shown on the map, there are isolated counties with a very high death rate from tuberculosis in the midst of many with low mortality. In these counties are located State sanatoria or other institutions caring for nonresident tuberculosis patients. Except in the more thickly populated States, correction for residence makes little or no change in the general picture of the distribution.

The mortality rates for each county are average annual rates per 100,000 population for a 5-year period. In approximately one-half of the States the rates are those for the period from 1929 to 1933, inclusive, and the remainder are for the years 1930 to 1934.

In the eastern section of the United States there is a large area of high mortality from tuberculosis for white persons, the high point of which is located in Kentucky and Tennessee. This region has experienced relatively high mortality and the zone immediately surrounding and extending from it, a somewhat lower mortality rate. This intermediate zone surrounding the region in Kentucky and Tennessee has its western limit in eastern Oklahoma and Kansas and extends across northern Arkansas and southern Missouri. Eastward the intermediate zone extends across West Virginia, eastern and northern Virginia, and Maryland. It then sweeps northward along the Atlantic coast across a narrow band of counties from Maryland to Maine, and includes most of the counties along the Hudson River in New York State and the greater part of the New England States. South of the zone of high mortality in Tennessee, the area of moderately high rates includes a considerable number of counties in the northern parts of Mississippi, Alabama, and Georgia, and also a few in the western parts of South Carolina and North Carolina. North of Kentucky the area covers a large number of counties in southern Illinois, Indiana, and Ohio.

The physiographic features of this large area are quite varied. In it are found mountain, foothill, and valley regions and also flat plains. The white population shows wide variations in urban and rural distribution and in other social and environmental conditions. A wide variety of occupations is found in various sections of this extensive area.

Another area in the eastern half of the country which has a relatively higher tuberculosis mortality than the surrounding region, is to be found extending across northern Michigan and Wisconsin and then into Minnesota. This area is less extensive and has had a lower mortality than the large area just described.

[4] Resident rates only for Connecticut, Massachusetts, Minnesota, New York, and Wisconsin.

In the western half of the United States there are a considerable number of counties along the southern border from Texas to California which have experienced an abnormally high mortality from tuberculosis. In Texas the high rates of counties along the Rio Grande are probably due mainly to the fact that deaths classified as white include a considerable number of Spanish-American or Mexican. Since many of them are actually native born, no statistical distinction is made between them and white persons of other national origins. It appears that tuberculosis mortality continues to be higher among these Spanish-Americans than among other white persons.

To a limited extent this same factor is partly responsible for the excessively high rates in some of the counties in Colorado, New Mexico, Arizona, and southern California. However, in most instances the high mortality has been due to the occurrence of many nonresident deaths among those who seek this region for the cure of tuberculosis. This fact is well known and needs little more than mention.

In Nevada, tuberculosis death rates among white persons are excessively high in several counties and moderately high in others. Unlike other regions of the Southwest, there are no sanatoria or other institutions for treatment of tuberculosis located in this area.

There are a large number of counties in the north-central part of California with comparatively high tuberculosis mortality. In some of these counties, particularly those east of the Sacramento Valley, there are a number of tuberculosis sanatoria, most of which are listed as county institutions. Since not all of the counties in the north-central part of the State have sanatoria, some other explanation will have to be found to account for the high mortality which has existed in this region.

In the extreme northwestern part of the country is another area where tuberculosis mortality is higher than for the surrounding territory. This area includes a few counties in northern Oregon, a considerable number in western Washington, and certain groups of counties in Idaho and western Montana. The relatively high rates in some of the counties in this region are due to the fact that deaths occurring in State institutions have not been allocated to the place of usual residence. In a few counties tuberculosis deaths among Indians account for a slightly higher rate. However, these two factors are responsible for the relatively high rates in only a few instances.

There is an area of considerable extent in the western part of the United States which has experienced a very low mortality from tuberculosis, as shown on the accompanying map. This area is coextensive with the area of low mortality in the north central and Great Lakes regions. Another area of low mortality extends southward from North Carolina along the Atlantic and Gulf coasts.

This study shows the advantage of studying the mortality from tuberculosis by some other unit than that of a State. Regions of high and low mortality do not begin or end with the borders of States. From the standpoint of prevention and control of the disease such a study indicates more clearly where efforts need to be concentrated to obtain maximum effects.

No effort has been made in this report to explain the reasons for certain areas of high mortality, except where certain obvious factors are responsible for a high death rate. The vastness of the entire country and the variety of environmental and social conditions found in different regions make it extremely difficult to explain wide differences in tuberculosis mortality. To students of epidemiology this offers a splendid field for study.

RAT HARBORAGE AND RATPROOFING[1]

By B. E. Holsendorf, *Passed Assistant Pharmacist, United States Public Health Service*

The problem of the control of rat life has been an ever-present one, and its solution has claimed the attention of man for many centuries. It is still with us, and no group of persons is more interested in solving it in a satisfactory manner than the public health officials of this and other countries. In the days of the legendary Pied Piper of Hamelin, and in the years that intervened between that time and a generation or two ago, rat control was regarded almost entirely as an economic matter, the concern only of those who suffer loss through the depredation of this animal and annoyance caused by its presence in private homes. Because of the losses sustained and the annoyances caused, the hand of man in all lands has been raised against the rat, and almost every known means has been employed to exterminate this pest.

The interest displayed in rat control by the victims of the rat's depredations was usually of a temporary character and of short duration, and expressed itself in periodic drives, trapping, poisoning campaigns, and similar attacks, which were carried out from time to time. As a general rule, after the immediate danger had been somewhat relieved, such activities were brought to an end, and no further efforts were put forth until conditions again became unbearable.

In earlier times little or nothing was known of the role which the rat and his parasites played in the transmission of certain diseases, especially plague and typhus fever, and the health official was not primarily interested in matters concerning rat control, which was considered, as before stated, purely an economic problem.

[1] Read at the eighth annual meeting of the Florida Public Health Association held at Tampa, Fla., Dec. 7-9, 1936.

However, in the last quarter of a century, as a result of the discoveries of research workers in many countries, this viewpoint has been completely changed. It is now recognized that the control of rats and rodent parasites is a most important public health function, and that it is very much the concern of the health officer, national, State, and local, because the presence of such rodents and their parasites—one a potential reservoir and the other a potential transmitting agent of bubonic plague and typhus fever—constitutes a grave health risk. It is now realized that, in order to reduce this risk to at least the point of safety, rat control must be attained and permanently maintained, for it is permanent control rather than periodic reduction in the number of rats and fleas that will confer the highest degree of health protection.

How can this be accomplished? What practical means can we employ, taking in consideration prevailing conditions, habits, and customs of people, absence of laws or ordinances bearing on the matter, and so forth? It is more or less common knowledge that we still have the rat with us in considerable numbers in practically every community, despite the efforts of people in every part of the world to reduce his population and to control his activities. This, it would appear, is rather conclusive evidence that the problem as yet has not been solved in a satisfactory manner. The reports submitted by delegates to each of the two international conferences on the rat, which were held in Paris in 1928 and 1931, throw some interesting light on this subject and give a mass of information as to the prevalence of rats in the various countries of Europe and their colonies in Asia and Africa.

The various methods of extermination which had been employed, natural enemies, poisons, traps, and similar means, were described in detail. While some remarkable results were reported to have been obtained, the consensus of opinion of the delegates to these conventions was that the results revealed the fact that much remained to be accomplished if permanent rat control was to be obtained. This has also been the experience of public health officials and interested persons in many communities in this country.

There must be some common, fundamental cause for the existence of this universal condition and of the failure to secure efficient permanent rat control. The basic habits of rats are more or less identical, and the eradicative measures which have been employed in various parts of the world coincide very generally with those with which we are familiar; and yet the common experience has been that the results obtained are unsatisfactory. What, then, is the fundamental reason for this failure?

From the experience which has been acquired and the lessons that have been learned during the conduct of many campaigns of rat control and the observation of many of those who have directed or supervised such campaigns, it is believed that the fundamental and basic factor involved is the one of *rat harborage*. Our failure to take serious consideration of the continued existence of the rat in large numbers and to understand and appreciate the important role which this lack of attention plays in providing the rat with the prime biological essential (a fixed habitat) for the propagation of his species is one of the principal reasons for the failures which we have experienced and which have been recorded in the histories of most of the countries of the world.

What is rat harborage, where is it found, and how does it operate to favor continuation of rat life? Rat harborage is the term given to describe the enclosed spaces which afford rats hidden or partly hidden shelter, homes, and suitable facilities for breeding and protection of their young until maturity. There are three general types of rat harborage, namely, (1) structural, (2) incidental, and (3) temporary.

Examples of the first are double walls, space between floors and ceilings, hollow-tile partitions, enclosed stairways, hollow boxed molding, raised platforms, and similar protected places.

Those of the second may be cited as furniture and equipment, things that are incidental to the use that is made of a building or its subdivisions and are installed therein.

Examples of temporary harborage are mass storage of material or merchandise, rubbish heaps, old furniture, odds and ends piled in cellars, attics, and closets, and similar accumulations which, if left undisturbed for periods of several weeks, can and will be used by rats for homes and breeding places.

Rat harborage is to be found in the great majority of the buildings of the older type, and also in some buildings of modern construction, and in a great many styles of furniture and equipment which are installed in mercantile and manufacturing establishments. Surveys which have been conducted in a number of cities and towns in different regions of the country have revealed some interesting facts as to the existence of rat harborage of the three general types just described. Photographic records have been made of a few of them so that each type of harborage and the surrounding conditions may be analyzed and studied.

In the majority of instances rat harborage exists because little or no consideration has been given by the owners, the architects, the builders, or the authorities to the desirability or necessity of providing for its elimination at the time the building was designed, planned, and constructed. As a result, man has provided and continues to provide rats with enclosed spaces ideally adapted for homemaking; and the

same may be said of certain types of fixtures and equipment. In other words, man himself thoughtlessly establishes rat sanctuaries and gives the matter no further thought until the rodents become so plentiful that they must be killed off or reduced in numbers.

An article which has a direct bearing on this phase of the subject appeared in Pencil Points for September 1934, under the title of "A Half Century of Architecture." The subject of this biographical review, a most outstanding New York architect, now deceased, had related this story to his friend who had written the article: Two wealthy ladies had built houses in Newport at different times, in a part of the town where shore rats were a considerable nuisance. One of the ladies had lived in her house for a couple of years and was calling for the first time on the newcomer, whose house had recently been completed. The older resident asked her neighbor how she liked her new house, to which the latter replied that she was very much pleased with it, but was troubled a great deal with rats. "Who was your architect?" asked the visitor. "Mr. Blank", the hostess replied. Hitching her chair forward and shaking an indignant forefinger the visitor said in a voice of concentrated venom, "Don't you know we had the same trouble with that man!"

The distinguished architect regarded this as a great joke on himself, and delighted in telling it to his friends. The coincidence of rat infestation in two expensively constructed houses designed by him and built under his supervision and direction did not suggest to him that architectural faults might be the cause but merely gave him grounds for merriment and jesting. Had there been a coincidence of leaks around the chimney structure or in or around the window frames, an investigation to find the cause would have been conducted and steps would have been taken to remove it. Public health officials must not be content until they have persuaded the architect and builder to change their point of view and give serious consideration to the matter of designing and building structures that are fundamentally free from rat harborages.

Rat harborage is not only responsible for the persistence of rat infestation of buildings and ships, but its existence is one of the chief causes of the high flea index found on rats.

Surg. C. R. Eskey, of the United States Public Health Service, in articles published in PUBLIC HEALTH REPORTS for September 5, 1930, and November 18, 1932, entitled, "Epidemiological Studies and Aspects of Bubonic Plague in Ecuador and Peru", has the following to say concerning rat harborage and its relation to the flea index and the possibility of transmission of plague: "Buildings (in Ecuador) offering the greatest rat harborage within them have the highest *cheopis* index," which Eskey found to be 7.37 for 45 class B buildings, 8.79 for 62 class C buildings, and 5.24 for 71 class D buildings. He also

observed that "the *cheopis* index will be proportional to the number of rats when the rats are harboring inside buildings which offer suitable places for flea reproduction."

On the basis of his findings in Peru a year later, Surgeon Eskey stated:

> The *cheopis* index was greater for rats caught in buildings. The greatest incidence of plague per thousand population in towns and cities in Peru occurred in the communities in which the rat harborage of buildings was greatest, regardless of the climatic location of the towns within or outside the zone most favorable to the existence of the chief transmitting agent, *X. cheopis*.

On the other hand, Eskey discovered in Ecuador that "rats harboring *outside* of buildings in Guayaquil have a *cheopis* index too small to cause an epidemic of plague among them", and he makes this significant statement in his summary:

> It is doubtful whether the low incidence or even complete absence of human plague due to relative rat-proof construction of buildings could be better illustrated than by the findings in central and southern Peru. It is desired to emphasize that in most parts of the world where *X. cheopis* is the transmitting agent, plague could never exist in epidemic form if the buildings were so constructed and maintained that the rat population within them was reduced to a minimum.

In Research now in Progress in Hawaii, published in the Pan-Pacific Research Institution, July 1933, Surgeon Eskey has this to say:

> The *cheopis* [flea] was found to be most abundant on rats caught in or under buildings * * *. Rats caught over three or four hundred feet away from buildings were practically free from this flea. In other words, the *cheopis* is a house flea. In this regard, I might mention that the ratproofing of buildings not only keeps out rodents, but will also reduce the number of plague-spreading fleas in a community. An example of such a reduction in the house plague-fleas due to reduced rat harborage in buildings was observed in the data collected from the Mahakua district, where the index of these fleas was much lower than in any other part of the island.

Since the research work of Maxcy, Dyer, Rumreich, and Badger has shown that the reservoir of infection of endemic typhus is in the rat, and that the transmission of this infection is by the rat flea, the observation of Eskey of the relation of rat harborage to the rat-flea index, and our own knowledge of the existence in practically all of our communities of the three types of rat harborage described above, which is largely responsible for the continued presence of both the rat and the high flea index, the elimination of such harborage becomes a paramount necessity if the spread of endemic typus fever is to be permanently controlled and its existence eventually wiped out. And this brings us to the consideration of the second subject mentioned in the title of this paper, namely, "Ratproofing."

What is ratproofing, scientifically and technically?

Scientifically, ratproofing is the process of applying methods that are the very opposite of those employed for game preservation.

Instead of giving or restoring to a species a home equipped with the facilities for breeding and protecting the young until maturity, the process is reversed; these facilities are removed, and every effort is made to deprive the rat of the use of them.

Technically, it is applying these four fundamental rules in the construction and upkeep of building structures and their equipment:

1. Employ an approved ratproof design that fundamentally eliminates unnecessary enclosed spaces.
2. Use material of a ratproof character.
3. Employ approved ratproof methods of construction and installation.
4. Provide for periodic inspection of buildings and equipment to insure permanent upkeep.

Types of design that are free from harborages, the classes of material that are inherently impervious to rat gnawing, and approved methods of ratproof construction and installation are given in several publications issued by the Public Health Service and the Department of Agriculture, and they will not be discussed in detail in this paper. Neither will time permit a discussion of the methods which have been suggested for the corrective ratproofing of existing buildings which are actually rat infested. To some extent, suggestions for accomplishing this have been embodied in survey reports, drawings, and various pamphlets which have been placed in the hands of several State health officers by the Public Health Service. Publications dealing with the various phases of this problem are being revised by the Public Health Service and will be available for distribution in the near future.

The launching of a campaign of this character—that is, "building out the rat"—is an undertaking which involves careful planning and training of personnel. The successful outcome depends on the support and cooperation given to the State and local health officers by the people of each community.

As long as the people remain passive and manifest little or no interest in this matter, no real progress in rat control is possible. It is the public who provide the rat with a secure home and food. Therefore, the public should be made conscious of this fact, and of the manner in which they could effectively cooperate to bring about the desired change.

This can be best accomplished through education, which should be practical and concrete, and should be brought to the very doorstep of the property owner or tenant of the building concerned. The various types of rat harborage must be demonstrated, and the practical methods of eliminating or correcting them must be explained and illustrated.

In addition to the education of the general public as just mentioned, and through the public schools, colleges, universities, civic, and other organizations, this permanent campaign must include the dissemination of information on the subject to architects, builders, contractors, plumbers, electricians, and others of the building trades to the end that they will have a better understanding of the problems involved, know what to do and how to do it, and thus be prepared to lend effective cooperation. No satisfactory progress can be made until these agencies give the health officer their support and cooperation. We must not only teach the property owner the necessity and desirability of having ratproof buildings and equipment, and to demand them, but we must invite, urge, and assist the people who design, construct, and equip buildings to be prepared to meet such a demand.

To carry out such an educational program will require careful and painstaking work, but it will be well worth the effort, for it will lay a solid foundation of understanding of the various phases of the problem, inspire public confidence, and result in more whole-hearted cooperation and support.

Legislation vital to the success of obtaining and maintaining permanent rat control can be more easily secured when the majority of the representative people have been trained by education and personal experience, or both, to recognize the need and wisdom of such action and to understand and appreciate the benefits and health protection which it will confer.

The special training which sanitary officers and others concerned should undergo in order to fit them for this important work has been outlined, as well as the type and character of the equipment with which they should be provided; the details will not be discussed here.

In conclusion, I would like to state that we would not delude you or ourselves with the idea that perfection has been attained, and that by waving of the magic wand of ratproofing all the rats in the world can be made to disappear as in the legendary story of the Pied Piper of Hamelin. It is felt, however, that as a result of the knowledge and experience on this subject which have been acquired, we have been able to outline a plan of campaign for rat control which is based on sound scientific principles, as well as a fair knowledge of rat psychology and habits.

The success of the campaign will depend largely upon how well the groups mentioned can be prevailed upon to cooperate and give the health officer continuous support. If all concerned will be as alert, resourceful, determined, and as tireless in their efforts to build out the rat and keep him out as we have found the rat to be to prevent his species from becoming extinct, permanent success is assured.

PURE FOOD REGULATIONS OF MEXICO

Under date of August 21, 1936, the first pure-food regulations of Mexico were promulgated by the Department of Public Health, which is given authority over such products by the Sanitary Code of December 20, 1935.

The regulations apply to both foodstuffs and beverages, including all "articles that are to be introduced into the digestive tract, with the exception of those used for therapeutic purposes", and require that all such articles intended for public consumption, in containers or sealed packages, "shall be registered in the Department of Public Health in order that the latter may authorize their manufacture, warehousing, transportation, possession, importation, elaboration, sale, or the furnishing thereof to the public." Foodstuffs that are claimed to have a therapeutic value must be registered as medicinal products. In the case of imported foodstuffs or beverages, there must be added to the application for registry a certification regarding the authorization of sale and consumption of such products in the country of origin. Certain information and a sample of the product are required to be submitted with the application for registry.

Tags, labels, notices, and commercial advertising of both domestic and foreign foodstuffs and beverages presented for registry, as well as the legends of the containers and packages, must be in Spanish, which can be repeated in other languages if desired. In addition, detailed requirements are specified regarding the form of tags and labels, especially those on adulterated products.

The Department of Public Health is to publish in the "Diario Oficial" the commercial names of foodstuffs and beverages that have been accepted for registry, as well as the lists of those rejected; and steps will be taken by the proper officials to prevent the entry into Mexico of products that have not been approved by the Department of Public Health.

The Department of Public Health will, periodically, ascertain whether approved products maintain the quality and conditions under which they were approved. Neither the products nor legends, etc., may be changed without previous approval of the Department of Public Health. The use of the name of the Department of Public Health, the names of the sanitary authorities, and the quoting in full or in part of the resolutions or decisions of the Department issued in connection with the registry of a product are prohibited in any publicity or commercial statements regarding the product, merely the form "Accepted D. S. P.", and the registry number being permitted.

DEATHS DURING WEEK ENDED DEC. 26, 1936

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

	Week ended Dec. 26, 1936	Corresponding week, 1935
Data from 86 large cities of the United States:		
Total deaths	8,548	9,044
Deaths per 1,000 population, annual basis	11.9	12.6
Deaths under 1 year of age	530	510
Deaths under 1 year of age per 1,000 estimated live births	48	47
Deaths per 1,000 population, annual basis, 52 weeks of year	12.0	11.4
Data from industrial insurance companies:		
Policies in force	68,974,371	67,841,506
Number of death claims	10,869	10,593
Death claims per 1,000 policies in force, annual rate	8.2	8.1
Death claims per 1,000 policies, 52 weeks of year, annual rate	9.7	9.5

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 Jan. 2, 1937, and Jan. 4, 1936

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Jan. 2, 1937, and Jan. 4, 1936

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936
New England States:								
Maine	-------	5	3	1	8	181	0	0
New Hampshire	-------	-------	-------	-------	1	2	0	0
Vermont	-------	-------	-------	-------	-------	203	0	0
Massachusetts	5	13	-------	-------	654	241	2	1
Rhode Island	1	-------	-------	-------	45	135	0	1
Connecticut	1	1	18	31	157	93	1	2
Middle Atlantic States:								
New York	28	42	[1] 487	[1] 21	220	543	6	12
New Jersey	13	14	26	9	278	12	4	3
Pennsylvania	50	68	-------	-------	59	283	5	3
East North Central States:								
Ohio	56	51	48	8	24	79	8	2
Indiana	21	40	322	40	5	4	1	3
Illinois	59	67	455	20	22	36	9	9
Michigan	41	20	12	3	41	22	2	3
Wisconsin	7	2	164	44	23	63	0	2
West North Central States:								
Minnesota	6	5	7	-------	21	66	0	0
Iowa	2	11	45	1	4	5	1	6
Missouri	23	27	189	150	8	13	2	5
North Dakota	-------	2	-------	2	3	2	0	0
South Dakota	-------	-------	9	-------	3	4	0	0
Nebraska	2	5	-------	-------	2	43	2	0
Kansas	10	13	13	7	4	7	0	0
South Atlantic States:								
Delaware	2	1	2	-------	82	85	0	1
Maryland [2] [3]	9	7	25	37	164	72	1	8
District of Columbia	5	18	3	4	11	5	2	2
Virginia	25	25	-------	-------	67	16	13	4
West Virginia	13	14	64	139	9	1	6	3
North Carolina [3]	61	22	46	16	88	3	5	4
South Carolina [3]	3	1	400	239	13	1	0	1
Georgia [3]	17	10	77	135	-------	-------	0	3
Florida	11	13	4	5	1	1	12	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Jan. 2, 1937, and Jan. 4, 1936—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936
East South Central States:								
Kentucky	15	19	57	13	9	46	32	7
Tennessee	25	17	108	81	31	6	5	9
Alabama [3]	19	18	121	213	2	19	7	3
Mississippi [3]	7	12					0	2
West South Central States:								
Arkansas	5	19	46	87		5	0	2
Louisiana	15	10	23	20	14	21	1	1
Oklahoma [4]	3	16	72	77	3	4	4	7
Texas [3]	55	21	362	155	127	2	5	3
Mountain States:								
Montana	3	1	282	41	3	17	0	1
Idaho	2	4	30		89	11	3	0
Wyoming		2	300		3	2	2	2
Colorado	5	9			7	5	2	3
New Mexico	4	1	15	2	1		0	1
Arizona		10	65	91	50	3	0	0
Utah [3]					80	1	1	0
Pacific States:								
Washington	5	1	2		17	79	0	1
Oregon		3	47	32	6	345	0	2
California	58	40	44	62	42	422	5	8
Total	692	700	3,993	1,786	2,451	3,209	149	130
53 weeks	29,471	38,734	161,816	120,202	287,242	725,081	7,541	5,721

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936
New England States:								
Maine	0	1	11	19	0	0	0	0
New Hampshire	0	0	17	13	0	0	0	0
Vermont	0	0	3	11	0	0	0	0
Massachusetts	0	1	176	234	0	0	0	2
Rhode Island	0	0	37	25	0	0	0	0
Connecticut	0	0	51	40	0	0	2	2
Middle Atlantic States:								
New York	0	4	610	620	35	0	4	4
New Jersey	1	2	115	121	0	0	2	0
Pennsylvania	0	0	500	528	0	0	11	9
East North Central States:								
Ohio	4	0	380	378	8	1	5	2
Indiana	0	1	194	273	7	7	2	0
Illinois	4	0	437	521	2	5	12	4
Michigan	1	1	520	194	0	0	11	1
Wisconsin	0	0	228	417	12	16	1	0
West North Central States:								
Minnesota	0	0	111	320	12	2	1	2
Iowa	0	3	84	113	12	1	3	0
Missouri	3	0	174	148	41	7	6	0
North Dakota	0	0	65	33	21	2	0	1
South Dakota	0	0	33	52	0	5	0	1
Nebraska	0	0	43	151	1	23	2	0
Kansas	2	1	270	143	21	11	1	0
South Atlantic States:								
Delaware	0	0	12	12	0	0	0	1
Maryland [2] [3]	0	0	68	64	0	0	3	2
District of Columbia	0	0	15	18	0	0	0	1
Virginia	1	0	38	45	0	0	7	12
West Virginia	1	0	41	64	0	0	5	0
North Carolina [3]	0	0	56	29	0	1	4	2
South Carolina [3]	1	0	5	12	0	0	1	2
Georgia [3]	1	0	13	15	0	0	2	4
Florida	2	0	12	12	0	0	0	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Jan. 2, 1937, and Jan. 4, 1936—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936	Week ended Jan. 2, 1937	Week ended Jan. 4, 1936
East South Central States:								
Kentucky	1	1	49	57	0	0	1	5
Tennessee	0	0	44	42	0	0	2	3
Alabama [3]	1	0	19	11	0	0	5	1
Mississippi [3]	2	0	19	17	0	0	2	0
West South Central States:								
Arkansas	1	0	4	33	0	0	3	9
Louisiana	0	0	14	15	0	0	12	7
Oklahoma [4]	0	1	16	33	4	0	4	1
Texas [3]	1	0	75	51	0	3	11	0
Mountain States:								
Montana	0	0	71	193	24	34	2	0
Idaho	0	0	19	33	17	0	3	0
Wyoming	0	0	28	229	1	4	0	0
Colorado	1	0	25	141	1	31	1	1
New Mexico	0	0	24	53	0	0	5	9
Arizona	0	0	7	15	0	0	0	0
Utah [3]	0	0	19	80	0	0	0	0
Pacific States:								
Washington	1	0	36	78	5	6	1	2
Oregon	0	0	44	51	22	0	0	1
California	4	5	215	284	5	4	14	8
Total	33	21	5,037	6,041	251	163	151	99
53 weeks	4,526	10,753	239,031	257,624	7,710	7,653	14,760	17,590

[1] New York City only.
[2] Week ended earlier than Saturday.
[3] Typhus fever, week ended Jan. 2, 1937, 25 cases, as follows: Maryland, 1; North Carolina 3; South Carolina, 2; Georgia, 14; Alabama, 3; Texas, 2.
[4] Exclusive of Oklahoma City and Tulsa.

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
August 1936										
Missouri	6	42	98	244	10	1	9	111	6	147
September 1936										
Missouri	7	43	109	192	5	-------	19	101	2	143
Puerto Rico	-------	58	43	1,834	100	1	2	-------	0	75
October 1936										
Arizona	4	25	150	6	58	1	-------	46	0	15
Missouri	5	114	442	87	15	-------	35	323	3	151
November 1936										
Arizona	-------	21	222	5	135	1	6	77	0	10

Summary of monthly reports from States—Continued

August 1936

	Cases
Missouri:	
Chicken pox	20
Dysentery	125
Mumps	33
Ophthalmia neonatorum	1
Rabies in animals	12
Septic sore throat	40
Trachoma	61
Undulant fever	2
Whooping cough	84

September 1936

Chicken pox:	
Missouri	6
Puerto Rico	3
Dysentery:	
Missouri	116
Puerto Rico	51
Filariasis:	
Puerto Rico	5
Mumps:	
Missouri	17
Puerto Rico	8
Ophthalmia neonatorum:	
Missouri	1
Puerto Rico	3
Puerperal septicemia:	
Puerto Rico	9
Rabies in animals:	
Missouri	12
Septic sore throat:	
Missouri	27

September 1936—Continued

Tetanus:	
Missouri	3
Puerto Rico	5
Tetanus, infantile:	
Puerto Rico	1
Trachoma:	
Missouri	63
Tularaemia:	
Missouri	1
Undulant fever:	
Missouri	7
Whooping cough:	
Missouri	81
Puerto Rico	38

October 1936

Chicken pox:	
Arizona	33
Missouri	70
Dysentery:	
Arizona	31
Missouri	135
Encephalitis, epidemic or lethargic:	
Arizona	1
Missouri	3
German measles:	
Arizona	8
Mumps:	
Arizona	45
Missouri	22

October 1936—Continued

Ophthalmia neonatorum:	
Missouri	1
Rabies in animals:	
Missouri	14
Septic sore throat:	
Missouri	29
Tetanus:	
Missouri	1
Trachoma:	
Arizona	22
Missouri	87
Tularaemia:	
Missouri	3
Undulant fever:	
Arizona	1
Missouri	4
Whooping cough:	
Arizona	12
Missouri	113

November 1936

Arizona:	
Chicken pox	43
Dysentery	30
Encephalitis, epidemic or lethargic	1
German measles	9
Mumps	19
Trachoma	31
Tularaemia	1
Whooping cough	3

WEEKLY REPORTS FROM CITIES

City reports for week ended Dec. 26, 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	6	1	0	0	0	2	21
New Hampshire:											
Concord	0	------	0	1	2	1	0	0	0	0	10
Manchester	0	------	0	2	4	0	0	0	0	0	21
Nashua	0	------	--------	0	-------	0	0	-------	0	0	--------
Vermont:											
Barre	------	------	--------	--------	--------	--------	--------	--------	--------	--------	--------
Burlington	1	------	0	0	0	1	0	0	0	0	9
Rutland	0	------	0	0	2	0	0	0	0	1	9
Massachusetts:											
Boston	2	------	3	6	28	47	0	14	0	111	237
Fall River	0	------	0	0	2	1	0	2	0	3	27
Springfield	0	------	0	7	3	4	0	0	0	11	35
Worcester	0	------	0	38	13	3	0	1	0	8	63
Rhode Island:											
Pawtucket	0	------	0	0	0	1	0	0	0	0	16
Providence	0	------	0	18	11	12	0	3	0	2	58
Connecticut:											
Bridgeport	0	------	1	23	5	2	0	1	1	3	37
Hartford	1	------	0	0	1	5	0	0	0	5	--------
New Haven	0	2	0	0	2	2	0	0	0	3	37
New York:											
Buffalo	10	------	1	41	0	24	0	5	0	13	141
New York	21	36	12	33	162	140	0	87	1	42	1,463
Rochester	0	------	1	1	10	4	0	1	0	12	68
Syracuse	0	------	--------	18	3	7	0	1	0	20	38
New Jersey:											
Camden	5	------	0	0	2	3	0	0	0	2	23
Newark	0	------	0	72	9	10	0	11	0	19	89
Trenton	0	------	0	0	6	3	0	2	0	3	28

City reports for week ended Dec. 26, 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								
Pennsylvania:											
Philadelphia	3	4	4	7	33	94	0	19	1	62	466
Pittsburgh	6	------	2	1	29	42	0	8	0	16	154
Reading	0	------	0	1	3	6	0	2	0	23	36
Scranton	0	------	------	0	------	2	0	------	0	0	------
Ohio:											
Cincinnati	3	------	1	0	26	13	0	3	0	2	151
Cleveland	4	7	4	0	26	46	0	12	2	32	201
Columbus	0	3	3	0	9	12	0	2	0	4	91
Toledo	0	1	0	2	5	5	0	8	0	5	56
Indiana:											
Anderson	0	------	0	0	4	12	0	0	0	2	16
Fort Wayne	1	------	0	0	2	2	0	0	0	0	22
Indianapolis	0	------	1	2	13	15	0	5	0	0	89
Muncie	0	------	0	0	4	1	0	0	0	1	12
South Bend	0	------	0	0	3	0	0	1	0	0	19
Terre Haute	2	------	0	0	0	0	0	0	0	0	26
Illinois:											
Alton	0	------	0	0	1	1	0	0	0	0	7
Chicago	6	161	32	4	126	168	0	48	0	56	962
Elgin	0	------	0	0	0	0	0	0	0	9	6
Moline	0	------	0	0	1	0	0	0	0	2	13
Springfield	------	------	------	------	------	------	------	------	------	------	------
Michigan:											
Detroit	14	12	2	6	24	137	0	17	7	59	274
Flint	0	------	0	0	5	6	0	1	0	0	35
Grand Rapids	0	------	1	2	2	6	0	0	2	18	41
Wisconsin:											
Kenosha	1	------	0	0	0	2	0	0	0	0	5
Madison	0	------	0	1	1	5	0	1	0	1	18
Milwaukee	2	1	0	5	10	36	0	4	0	30	117
Racine	0	------	0	0	0	6	0	0	0	1	15
Superior	0	------	0	0	0	2	0	0	0	1	5
Minnesota:											
Duluth	0	------	0	1	1	21	0	1	1	2	16
Minneapolis	3	------	1	1	4	9	0	0	1	3	93
St. Paul	0	2	2	1	8	8	0	1	0	12	72
Iowa:											
Cedar Rapids	0	------	------	0	------	2	0	------	0	1	------
Des Moines	0	------	------	0	------	14	0	------	0	0	29
Sioux City	1	------	------	0	------	9	2	------	0	0	------
Waterloo	0	------	------	1	------	1	0	------	0	2	------
Missouri:											
Kansas City	2	1	0	1	11	24	0	3	0	6	103
St. Joseph	0	------	0	0	7	4	8	0	0	0	24
St. Louis	4	------	0	0	16	19	0	2	2	53	218
North Dakota:											
Fargo	0	------	0	0	1	0	0	1	0	0	11
Grand Forks	0	------	------	0	------	0	0	------	0	0	------
Minot	0	------	0	0	0	0	0	1	0	0	5
South Dakota:											
Aberdeen	0	------	------	0	------	0	0	------	0	0	------
Sioux Falls	0	------	0	0	0	0	0	0	0	0	6
Nebraska:											
Omaha	1	------	2	1	11	6	0	0	0	0	63
Kansas:											
Lawrence	0	------	0	0	1	0	0	0	1	0	2
Topeka	------	------	------	------	------	------	------	------	------	------	------
Wichita	2	------	0	2	5	5	0	1	0	2	33
Delaware:											
Wilmington	1	------	0	50	3	0	0	1	0	0	22
Maryland:											
Baltimore	5	4	3	66	28	23	0	7	1	72	218
Cumberland	0	------	0	0	3	1	0	0	1	0	21
Frederick	0	------	0	0	0	0	0	0	0	1	5
District of Col.:											
Washington	5	2	2	5	25	12	0	9	1	6	163
Virginia:											
Lynchburg	1	------	1	9	2	0	0	0	0	0	16
Norfolk	0	------	0	0	1	4	0	0	0	1	17
Richmond	0	------	2	0	13	5	0	4	0	4	66
Roanoke	0	------	0	0	10	1	0	0	0	2	23
West Virginia:											
Charleston	0	------	0	0	8	0	0	3	0	0	47
Huntington	0	------	------	0	------	3	0	------	0	0	------
Wheeling	0	------	0	0	2	0	0	0	0	0	15

City reports for week ended Dec. 26, 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								
North Carolina:											
Gastonia	1			1		0	0		0	0	
Raleigh	0		0	0	1	0	0	0	0	0	18
Wilmington	0		0	0	3	0	0	0	0	1	13
Winston-Salem	1	1	0	0	2	2	0	0	0	0	10
South Carolina:											
Charleston	4	15	0	0	2	7	0	0	0	1	17
Columbia											
Florence	0		0	0	2	0	0	0	0	0	8
Greenville	1		0	0	0	1	0	0	0	0	2
Georgia:											
Atlanta	1	9	2	0	12	7	0	5	0	0	94
Brunswick	0		0	0	0	0	0	1	0	0	4
Savannah	2	20	1	0	2	1	0	1	0	1	30
Florida:											
Miami	0		0	0	2	0	0	0	0	0	29
Tampa	0	1	1	0	1	0	0	4	0	1	26
Kentucky:											
Ashland											
Covington	0		0	0	1	1	0	1	0	1	22
Lexington	1		0	14	2	1	0	2	0	0	25
Tennessee:											
Knoxville	1	2	2	0	3	1	0	2	0	0	18
Memphis	0		1	0	11	4	0	3	0	3	62
Nashville	2		0	0	2	2	0	2	0	3	28
Alabama:											
Birmingham	1		3	0	7	4	0	0	0	0	61
Mobile	0	1	0	0	2	0	0	1	0	0	26
Montgomery	2			0		1	1		0	0	
Arkansas:											
Fort Smith	0			0		2	0		0	0	
Little Rock											
Louisiana:											
Lake Charles	0		0	0	0	0	0	0	0	0	4
New Orleans	7	2	2	0	17	5	0	12	1	0	187
Shreveport	0		0	0	5	1	0	1	0	0	44
Oklahoma:											
Tulsa	1			0		5	0		0	0	
Texas:											
Dallas	1	2	2	3	9	14	0	2	1	2	61
Fort Worth	1		0	29	9	2	0	3	0	0	34
Galveston	0		0	0	2	0	0	0	0	0	24
Houston	2		0	0	5	1	0	3	1	0	54
San Antonio	3		4	0	5	0	0	6	0	0	59
Montana:											
Billings	0	1	0	0	4	1	0	0	0	0	12
Great Falls	0		0	1	4	2	1	0	0	1	11
Helena	0	1	1	0	0	1	0	0	0	1	4
Missoula	0		0	0	2	0	0	0	0	0	6
Idaho:											
Boise	0		0	0	3	1	0	0	0	0	9
Colorado:											
Colorado Springs	0		0	0	2	2	0	1	0	0	19
Denver	4		2	4	13	6	0	6	0	45	74
Pueblo	1		0	0	1	3	0	0	0	0	11
New Mexico:											
Albuquerque	0		0	1	4	2	0	3	0	0	28
Utah:											
Salt Lake City	0		1	3	2	7	0	1	0	0	37
Nevada:											
Reno											
Washington:											
Seattle	0		1	4	9	4	0	8	0	3	109
Spokane	0		0	2	9	6	1	0	0	0	34
Tacoma	0		0	0	1	3	0	0	0	0	11
Oregon:											
Portland	0	2	1	1	14	3	0	1	0	7	79
Salem	0			0		0	0		0	0	
California:											
Los Angeles	10	16	1	5	25	26	0	12	2	48	349
Sacramento	1		1	0	4	13	0	1	0	1	28
San Francisco	2		2	2	12	10	0	3	1	6	186

City reports for week ended Dec. 26, 1936—Continued

State and city	Meningococcus meningitis		Poliomyelitis cases	State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:				Iowa:			
Boston	1	0	0	Des Moines	1	0	0
New York:				Missouri:			
New York	3	1	0	St. Louis	1	0	0
Rochester	1	0	0	District of Columbia:			
Pennsylvania:				Washington	2	3	0
Philadelphia	1	0	0	West Virginia:			
Pittsburgh	3	0	0	Wheeling	1	0	0
Ohio:				Georgia:			
Cincinnati	2	0	0	Atlanta	1	1	0
Cleveland	2	0	1	Tennessee:			
Indiana:				Memphis	3	0	0
Anderson	1	0	0	Louisiana:			
Indianapolis	1	0	0	New Orleans	1	1	0
South Bend	0	1	0	Shreveport	0	1	0
Illinois:				Texas:			
Chicago	2	1	0	Dallas	1	1	0
Michigan:				Houston	1	0	0
Detroit	1	0	1	Oregon:			
Flint	0	0	1	Portland	0	1	0
Minnesota:				California:			
Minneapolis	2	2	0	Los Angeles	0	1	0

Encephalitis, epidemic or lethargic.—Cases: Baltimore, 1, Birmingham, 1.
Pellagra.—Cases: Charleston, S. C., 1; Atlanta, 2; Savannah, 2; Dallas, 3.
Typhus fever.—Cases: Savannah, 1.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—2 weeks ended December 12, 1936.—During the 2 weeks ended December 12, 1936, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis			1	1	3	1				6
Chicken pox		14	3	678	1,037	120	256	33	300	2,441
Diphtheria		10	2	58	11	9	3	5	5	103
Dysentery					3					3
Erysipelas		1		8	11	4	3	2	7	36
Influenza		20			17	2	4		11	54
Lethargic encephalitis									2	2
Measles		3	18	525	486	117	1,022	214	1,233	3,618
Mumps			150		319	28	26	68	140	731
Paratyphoid fever					1					1
Pneumonia	1	3			31		7		19	61
Poliomyelitis						24	2	1	1	28
Scarlet fever		23	10	185	265	132	47	182	62	906
Smallpox								4		4
Trachoma					68		1		8	77
Tuberculosis	6	11	27	104	93	15	22	5	22	305
Typhoid fever		1	3	30	4	1	9		13	61
Whooping cough		139	2	316	251	12	82	8	20	830

CZECHOSLOVAKIA

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

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	2	1	Paratyphoid fever	38	2
Cerebrospinal meningitis	7	5	Poliomyelitis	23	4
Chicken pox	276		Puerperal fever	35	16
Diphtheria	3,063	178	Scarlet fever	3,278	51
Dysentery	100	20	Trachoma	62	
Influenza	47	6	Typhoid fever	891	65
Malaria	85				

GREAT BRITAIN

England and Wales—Infectious diseases—13 weeks ended September 26, 1936.—During the 13 weeks ended September 26, 1936, cases of certain infectious diseases were reported in England and Wales as follows:

Disease	Cases	Disease	Cases
Diphtheria	11,868	Puerperal pyrexia	1,540
Ophthalmia neonatorum	1,174	Scarlet fever	20,112
Pneumonia	5,342	Typhoid fever	1,488
Puerperal fever	443		

England and Wales—Vital statistics—Third quarter 1936.—During the quarter ended September 30, 1936, 155,746 live births and 99,941 deaths were registered in England and Wales. The following vital statistics are taken from the Quarterly Return of Births, Deaths, and Marriages, issued by the Registrar General of England and Wales. The figures are provisional.

Birth and death rates in England and Wales, quarter ended Sept. 30, 1936

Annual rates per 1,000 population:	
Live births	15.2
Stillbirths	.59
Deaths, all causes	9.8
Deaths under 1 year of age	[1]43
Deaths from:	
Diarrhea and enteritis (under 2 years of age) [1]	5.5
Diphtheria	.06
Annual rates per 1,000 population—Continued	
Deaths from:	
Influenza	0.04
Measles	.02
Scarlet fever	.01
Typhoid fever and paratyphoid fever	.01
Violence	.51
Whooping cough	.04

[1] Per 1,000 live births.

JAMAICA

Communicable diseases—4 weeks ended December 26, 1936.—During the 4 weeks ended December 26, 1936, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chicken pox	1	3	Puerperal fever	1	----
Diphtheria	3	----	Scarlet fever	----	2
Dysentery	10	4	Tuberculosis	31	78
Leprosy	----	3	Typhoid fever	8	29

YUGOSLAVIA

Communicable diseases—November 1936.—During the month of November 1936 certain communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	42	6	Poliomyelitis	11	2
Cerebrospinal meningitis	12	4	Scarlet fever	754	7
Diphtheria and croup	1,331	108	Sepsis	11	4
Dysentery	21	6	Tetanus	28	12
Erysipelas	379	10	Typhoid fever	466	46
Measles	1,071	2	Typhus fever	7	----
Paratyphoid fever	21	1			

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 December 25, 1936, pages 1803-1815. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued January 29, 1937, and thereafter, at least for the time being, in the issue published on the last Friday of each month.

Cholera

India—Negapatam.—During the week ended December 26, 1936, 11 cases of cholera were reported in Negapatam, India.

Siam—Bangkok.—During the week ended December 26, 1936, 2 cases of cholera with 2 deaths were reported in Bangkok, Siam.

Plague

Argentina.—During the first half of December 1936, plague was reported in Argentina as follows: Cordoba, Cordoba Province, 5 cases; San Luis, San Luis Province, 1 case, 1 death.

Hawaii Territory—Island of Hawaii—Hamakua District.—On December 31, 1936, 1 rat found in Kukaiau, and 2 rats found in Paauhau, all in Hamakua District, Island of Hawaii, Hawaii Territory, have been proved plague-infected.

Typhus Fever

Egypt—Port Said.—During the week ended December 26, 1936, 1 case of typhus fever with 1 death was reported in Port Said, Egypt.

Eritrea—Asmara.—During the period December 1–15, 1936, 2 cases of typhus fever were reported in Asmara, Eritrea.

Sierra Leone—Freetown.—During the week ended November 7, 1936, 1 case of typhus fever was reported in Freetown, Sierra Leone.

Yellow Fever

Colombia.—Yellow fever has been reported in Colombia as follows: During the period November 29–December 19, 1936, 3 cases of yellow fever with 1 death were reported in Colombia, no other location being given. In Intendencia of Meta, Colombia, yellow fever was reported as follows: October 24, 1936, 1 case in Quenane; October 31, 1936, 1 case in Restrepo; November 23, 1936, 1 case with 1 death in Villavicencio.

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