

Public Health Reports

Vol. 60 • MAY 4, 1945 • No. 18

THE CONTROL OF RAT FLEAS (*XENOPSYLLA CHEOPIS*) BY DDT¹

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INTRODUCTION

The rickettsiae of typhus fever are transmitted from rat to rat by rat fleas. Humans contract the disease from the rats or fleas but the details of the transmission are not clear. Up to the present time the control of typhus fever in man has consisted of eradicating rats by trapping, poisoning, and ratproofing buildings. These methods have produced good results but additional measures are necessary to stop the annual increase in the number of cases of typhus fever.

A possible method of reducing typhus is to reduce the number of fleas on the rats and thereby break the chain of transmission. This paper reports the results of experiments designed to control the fleas on rats.

THE EFFECT OF DDT ON RAT FLEAS

DDT (dichlorodiphenyltrichloroethane) is an insecticide which has produced spectacular results on a variety of insect pests. When used as a spray DDT will kill house flies, cockroaches, bedbugs, and mosquitoes. Used as a powder DDT effectively controlled human louse infestations. The following experiments were conducted with DDT on rat fleas, *Xenopsylla cheopis*:

Experiments on isolated fleas.—Ten fleas were placed in a pail with a small amount of pure DDT. Within half an hour the fleas could no longer jump. Some continued to move their legs but all died in 4 hours. The fleas kept in a pail without DDT lived 2 days.

Fifty live fleas were placed in a jar containing a mixture of 1 gm. of DDT and 100 gm. of floor sweepings in an attempt to approximate natural conditions in buildings. After 5 hours many fleas were paralyzed. The next morning all were dead. Fleas in a jar without DDT lived for 2 days.

¹ From the Typhus Control Unit, States Relations Division.

Elimination of fleas on rats.—In order to determine whether DDT will kill fleas on the rats the following experiments were performed. Live Norway rats (*Rattus norvegicus*) or roof rats (*Rattus rattus alexandrinus*) were captured in No. 0 steel traps and kept in wire cages in a protected place out of doors, at San Antonio, Tex. Each rat was placed for 10 to 15 minutes in a bag containing 1 gm. of powder containing varying percentages of DDT. The rat was then put back in the cage. Two days later the rat was chloroformed and fleas, mites, and lice were collected by combing.

The results of the experiments are shown in table 1. Although it is not known how many fleas were on each rat before treatment, it is known that the average number of fleas per wild rat during this period was 19.1. Furthermore, the presence of fleas on the control rats, which were placed in a bag without DDT, shows that DDT eradicated the fleas. Rats maintained under these conditions were found to have fleas for as long as the rat was kept alive. One rat had 7 fleas at the end of 84 days' captivity. Another had 23 fleas at the end of 12 days' captivity.

It is clear that a very small amount of DDT will kill the fleas on rats under these conditions.

TABLE 1.—Effect of DDT on ectoparasites

Treatment (percent DDT)	Number of rats	Index ¹		
		Fleas	Mites	Lice
5.00.....	5	0.0	0	0.6
2.50.....	3	.3	0	0
1.25.....	5	.2	0	1.8
.63.....	5	0	.6	1.2
.31.....	5	.8	.6	13.4
.16.....	4	4.8	.3	3.3
.08.....	4	3.0	.3	1.5
.04.....	3	11.7	0	1.3
.02.....	2	12.5	0	1.6
Controls.....	10	4.5	0	11.8

¹ A average number per rat.

Reduction of fleas on rats in buildings.—The next experiment consisted in attempting to eradicate the fleas under natural conditions. A number of rats were captured in several typical rat-infested stores and the flea indices were calculated. Then the store was dusted with a 20-percent mixture of DDT. Later at intervals more rats were captured in these stores and the flea indices calculated.

The flea indices before and after dusting are shown in table 2. The general flea index for San Antonio during these months is shown in table 3 to prove that a seasonal change is not entirely responsible for the decrease in the flea indices in the stores. Note that the flea index increased in July.

It is apparent that DDT dusted in buildings will reduce the number of fleas on rats for many months, even though some of these rats probably had recently entered the buildings.

Elimination of flea nuisance.—Occasionally houses or yards become infested with human fleas (*Pulex irritans*), cat fleas (*Ctenocephalides felis*), or dog fleas (*C. canis*). Three opportunities occurred for using DDT under these circumstances.

Two sheds were heavily infested with *P. irritans*. One shed was dusted and no fleas could be found 24 hours later. The other shed was still heavily infested. At another place a garage and yard were cleared of a heavy infestation of *C. felis* in 2 days and remained free of fleas. Another garage was completely free of *C. felis* 24 hours after dusting.

TABLE 2.—*Reduction of Xenopsylla cheopis in stores*

Store	Before DDT dusting			After DDT dusting					
	Month	Rats	Index	July		August		October	
				Rats	Index	Rats	Index	Rats	Index
A	June	8	35.8	12	1.5	10	1.3	5	0.2
B	June	11	9.0	9	.2	6	.0	2	.3
C	July	11	5.4	11	.2				
D	July	7	13.4			5	.4		
E	August	4	10.1					22	1.0
F	September	4	10.2					9	.1

TABLE 3.—*Flea indices of rats in San Antonio*

Date	Rats caught	Fleas per rat
1944		
May 19-31	11	24.6
June 1-30	41	14.9
July 1-31	38	17.8
Aug. 1-31	72	6.6
Sept. 1-30	59	3.4
Oct. 1-31	65	6.1

THE USE OF DDT IN TYPHUS CONTROL

It has been shown that DDT will reduce the fleas on rats in buildings, but it remains to be determined if the use of DDT will prevent typhus fever. It is planned to make a field test of DDT in a typhus-infested community at the earliest opportunity. It should be noted that DDT is an auxiliary measure to the more fundamental programs of rat eradication. Unless the rats are exterminated, DDT would have to be used every year.

On several occasions DDT has been used at the place of origin of a case of typhus fever and the fleas have thereby been controlled. However, due to the inherent delay in reporting sickness, use under these circumstances is usually too late to prevent typhus fever or the spread of the disease.

DDT should probably be used before trapping or poisoning rats in eradication campaigns. When a rat dies or is killed in a trap the fleas leave in search of another host. Evidence indicates that occasionally typhus is spread by these fleas and that humans are infected. The use of DDT should prevent this possibility.

DDT could be used in certain buildings which cannot be economically freed of rats. Slum areas are unable to pay for ratproofing and eradication, but DDT could be dusted in these buildings very cheaply.

The fundamental conditions for the spread of plague in cities appear to be the same as for typhus fever, and hence it is likely that DDT can be used in the control of plague. Some observations on the use of DDT in rat burrows suggest that DDT might even be useful in checking plague in wild, burrowing rodents.

The procedures for preparing and dusting the DDT mixture are very simple. Waste or damaged flour is a suitable diluent and may be obtained easily and cheaply from mills or grocery stores. A mixture has been found to be sufficiently dispersed to be dusted easily. A dust gun of the type ordinarily used for dusting holes with cyanide gas is satisfactory for spraying the dust.

It requires about 20 minutes to locate the rat runs and holes in an ordinary restaurant, and about 5 minutes to dust. The dust should not be spread widely but merely sprayed along rat runs and into rat holes or burrows. The quantity of dust used will depend, not upon the area of the building, but upon the amount of rat infestation. A heavily infested restaurant will require about a pound of the mixture. Enough dust should be used to cover the rat runs lightly and to leave little piles inside of or in front of rat holes. A special effort should be made to spray dust into rat nests to kill the larvae and adults hidden there.

The cost of dusting cannot be definitely stated because the price of DDT is changeable. Furthermore, labor is the largest item, and the cost varies from place to place. It may be stated that 1 laborer, trained to recognize rat infestation, and 1 unskilled laborer can inspect and dust about 25 ordinary restaurants or grocery stores in a day. Obviously, department stores or hotels require more time.

DISCUSSION

The ultimate aim of this research is obviously to control typhus fever in man insofar as the rat flea, *X. cheopis*, is involved. It is hoped that the reduction or eradication of rat fleas will make it impossible for the rickettsiae to maintain themselves in the rat population. To prove beyond reasonable doubt that DDT can control typhus in humans will require considerable time. Only careful epidemiologic and enzootiologic studies can determine the results.

There exists the possibility that typhus can be contracted by inhaling dust containing rickettsiae from flea feces. If this be a means of transmission, typhus can be expected to occur for some time even after the fleas are eradicated.

Incidental observations during this study suggest that DDT does not eliminate mites (*Liponyssus bacoti* and *Echinolaelaps echidninus*) and, surprisingly, rat lice, *Polyplax spinulosa*. Also, chicken fleas (*Echidnophaga gallinacea*) were found on rats from poultry houses which had been dusted with DDT. The index, 1 month after dusting, was 3.1 in one store and 3.2 in another. The mites and lice are seldom found on rats during the warm months and hence no experiments were designed to determine the effect of DDT on them. The chicken or sticktight fleas are well-named because they bury the head and thorax into the skin of the rat and thus possibly escape the action

of DDT. Although rat mites and rat lice are not common on rats during the endemic typhus fever season, there exists the possibility that these ectoparasites can maintain typhus even in the absence of rat fleas.

SUMMARY

Laboratory and field experiments were conducted to eradicate rat fleas (*X. cheopis*) with the insecticide DDT in order to develop an additional method for the control of typhus fever.

Fleas placed in a jar with small amounts of DDT died in 4 hours. Rats were found to be free of fleas after the application of small amounts of DDT to the fur. Rats were captured in buildings before and after the building was dusted with DDT. The number of fleas per rat in 6 stores was 13.9 before dusting and 0.6 a month after dusting. Two stores had an index of 0.2 and 0.5 fleas per rat 4 months after dusting.

The use of DDT to reduce the number of rat fleas is a practical procedure which may be useful in control of typhus fever.

A TWO-CAVITY DUST COUNTING CELL

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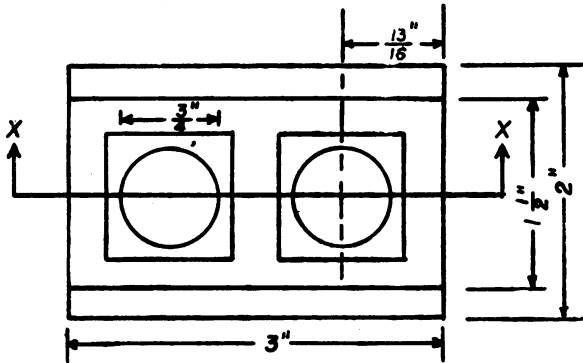
In the conventional dust counting procedure, utilizing the light field impinger technique, two separate counting cells are plated from each atmospheric sample under investigation (1, 2). This has been recommended in order to reduce to a minimum errors due to improper cleaning of glassware, scratches on the cells, etc. However, the time required for cleaning and setting up a number of cells frequently becomes objectionable, particularly where large numbers of dust samples are counted routinely. A single two-cavity cell, which combines the fundamental features of one of the current commercial cells into a single unit, is herein described. By means of this unit the cleaning and setting-up time is materially reduced with no sacrifice in the accuracy of the resulting counts.

The Dunn cell (3) lends itself admirably to modification into a two-cavity unit, due to its compactness and the ease of cleaning the components. The commercial model of this cell at the present time consists of three separate components, a Pyrex glass base, a glass spacer of 1.0-mm. thickness perforated by a single 20-mm. diameter hole, and a suitable cover glass. The design of a two-cavity unit incorporating these same principles is shown in the accompanying sketch. All parts are of glass. The only critical dimension of the

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entire unit is the thickness of the spacer, which determines the thickness of the cell. As Dunn (3) has previously stated, this should be ground to an exact thickness of 1.0 mm.

The over-all size of the unit is such that a standard 3'' x 1½'' or 3'' x 2'' microscope slide is used for the base, thus facilitating the replacement of this component. It has been the writer's experience that, barring breakage, the remaining components of this type of cell will last indefinitely. However, the base requires replacement from time to time, due to scratching. Therefore, a practically new complete unit can be obtained merely by replacing the scratched



PLAN VIEW OF ASSEMBLED CELL



SECTION ON XX

FIGURE 1.

base with a new microscope slide. Individual cover glasses for each of the two cavities have been found to be more satisfactory for maintaining a satisfactory liquid seal (of greater importance when using alcohol than when using water) than one single large cover. Standard No. 2 1-inch square microscope slide cover glasses are quite satisfactory. However, covers made from a Sedgwick-Rafter cell cover glass are considerably more rugged. One of these Sedgwick-Rafter covers, if cut, will make two of the size needed.

In order to check the accuracy of the counts obtained with the two-cavity unit, parallel counts were done with it and two standard Sedgwick-Rafter cells, using the United States Public Health Service standard light field technique. All of the cells from each one of the samples were filled from the same pipetteful of sample, and were counted as soon as complete settling had occurred. The data obtained from these counts are shown in the following table:

Sample No.	Sedgwick-Rafter counts			Two-cavity unit counts		
	Cell No. 1	Cell No. 2	Average	Cell No. 1	Cell No. 2	Average
1	69.8	76.2	73.0	65.2	73.2	69.2
2	91.4	105.4	98.4	103.2	92.6	97.9
3	87.0	84.0	85.5	80.4	86.8	83.6
4	73.4	63.2	68.3	62.6	71.4	67.0
5	85.1	74.7	79.9	90.0	81.0	85.5
6	62.0	65.2	63.6	63.4	64.8	64.1
7	65.6	66.8	66.2	72.4	70.5	71.5

The above counts represent the average of five fields (each 0.25 mm.²) counted in each of the cells. The first five samples contained atmospheric dust collected in an asbestos textile plant; the last two, dust collected in a pyrophyllite milling plant. All samples were collected in alcohol. The data confirm the earlier statement made with respect to no loss in accuracy in the resulting counts. The variation observed is believed to be within the limits of experimental error, and is no greater than one would probably have observed if the two-cavity unit had been replaced by two Sedgwick-Rafter cells.

In addition to the time saved in cell cleaning and setting up with this two-cavity unit, as mentioned at the beginning of this article, noticeable time is saved in microscope mounting and focusing, in that only half the number of these operations are required as when using two separate cells. This is especially advantageous when using a microprojector.

A unit of the above design has now been in use in the laboratories of the North Carolina State Board of Health for approximately nine months and has definitely proved its advantages.

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OUTBREAKS OF DISEASE IN THE UNITED STATES DURING 1943, TRANSMITTED BY WATER, MILK AND MILK PRODUCTS, AND OTHER FOODS

The list of outbreaks of disease transmitted through water, milk and milk products, and other food products, as reported by the State health authorities in 1943, includes a variety of enteric and other diseases and a number of different foods. A review of the data reveals that disregard of fundamental sanitary principles caused a considerable amount of preventable illness and mortality in this country in 1943.

This report deals only with outbreaks and therefore does not include all cases of the diseases transmitted by water and food products. The

389 such outbreaks reported in 1943 caused approximately 24,000 cases and 56 deaths.

Although not as important numerically as other diseases conveyed by means of food and water, botulism resulted in the highest fatality rate, with 10 cases and 7 deaths, in all of which the source was reported to be home-canned foods. An outbreak of botulism occurring in New Mexico, reported due to the eating of home-canned pumpkin, resulted in 4 cases and 4 deaths.

Gastroenteritis and typhoid fever were the principal water-borne diseases. The most usual causes of water-borne epidemics were lack of, or improper, chlorination and inadequate protection of water supplies from surface drainage and seepage from sewage.

Among the most important sources of contamination which caused milk and milk product outbreaks were lack of, or improper, pasteurization, improper cleansing of utensils, bulk-milk contamination, and carriers. Food poisoning and gastroenteritis were involved in 60 percent of the milk-borne outbreaks.

Foods other than milk and milk products were responsible for 73 percent of the outbreaks, 59 percent of the cases, and 59 percent of the deaths. Some of the causes or means of contamination reported were home-canned foods; lack of, or improper, refrigeration; infected food handlers; careless or improper handling in preparation of salads; insufficient cooking; and possible infection by rodents and flies. Food poisoning and gastroenteritis were involved in 89 percent of the food-borne outbreaks.

The following table summarizes briefly the report issued by the Division of Sanitary Engineering of the Public Health Service:

Outbreaks of disease in the United States during 1943, conveyed by water, milk and and milk products, and other foods

Medium	Number of outbreaks	Number of cases	Number of deaths	Principal diseases in outbreaks	Principal food involved or suspected, or source of water
Water.....	26	5, 612	15	Gastroenteritis and typhoid fever.	Public well, school well, private well, surface supply, irrigation ditch—principally untreated.
Milk and milk products.	40	1, 590	7	Diphtheria, food poisoning, gastroenteritis, scarlet fever, and typhoid fever.	Sweet milk, ice cream, cheese, milk shakes, and buttermilk.
Foods other than milk and milk products.	285	13, 938	33	Dysentery, chemical or bacterial food poisoning, gastroenteritis, dysentery, typhoid fever, paratyphoid fever, scarlet fever, trichinosis, and botulism.	Home-canned mushrooms, tomatoes, peas, pumpkin, and string beans; fish, ham, stew, soup, meat and egg salad sandwiches, chicken and dressing, eggs, cake, custard, potato salad, pie, shrimp salad, turkey dressing, sausage, raw oysters, souse, baked beans, cream puffs, cream pastry, creamed potatoes, chocolate eclairs, tapioca pudding.
Undetermined vehicle...	38	2, 525	1	Dysentery, food poisoning, gastroenteritis (including Salmonella infection), typhoid fever.	
Total.....	389	23, 665	66		

PROVISIONAL MORTALITY FOR THE FIRST 9 MONTHS OF 1944

The mortality rates in this report are based upon preliminary data for 41 States, the District of Columbia, Alaska, Hawaii, and the Canal Zone. Comparative data for the first 9 months of 1943 and 1942 are also presented for 39 States and the District of Columbia.

This report is made available through a cooperative arrangement with the respective States which furnish provisional quarterly tabulations of current births and deaths to the United States Public Health Service. Because of some lack of uniformity in the method of classifying deaths according to cause, as well as some delay in filing certificates, these data are preliminary and some deviation from the final figures may be expected, especially for specific causes of death for individual States. Nevertheless, it is believed that the trend in mortality within each State is reasonably accurate. Comparison of specific causes of death for different States, however, is subject to error because of the factors mentioned above.

The population of the different States used in computing these rates are estimates as of July 1 of each year as published by the Bureau of the Census (Release P-45, No. 2, March 10, 1945). The estimates include members of the armed forces stationed in each State but exclude those overseas. Rates in some of the earlier reports in this series were based on more preliminary population estimates and may not agree with those in this report because of changes in population estimates. All the rates are subject to considerable error because of the confusion as to population; for example, it seems better to exclude from the population the overseas fighting forces, but a considerable number of the seriously sick and wounded are evacuated to home hospitals and may die and be counted among the deaths in this country.

The crude mortality rate from all causes for the first 9 months of 1944 was 10.6, the same as for the corresponding period in 1943 and about 4 percent above the rate in 1942. No data are available for making any adjustment in the rates for changes in age distribution by reason of so many younger men being overseas, but it is known that these changes make for higher crude death rates in 1943 and 1944 even without increases in the rates for persons of specific ages.¹

The crude death rate from all causes was higher during the first quarter of 1944 than in the same quarter of either of the 2 preceding years, but during both the second and third quarters the rate was lower than in 1943 but slightly higher than in 1942. The influenza epidemic of December 1943 and January 1944 accounts for at least part of this increase. Of the 40 States with available data, 17 had a higher death rate in the first 9 months of 1944 than in the same period of 1943, 19 had a lower rate, and in 4 States the rate was the same in

¹ See PUBLIC HEALTH REPORTS for August 11, 1944, p. 1061, for more details on this matter. For the year as a whole adjustments for changes in age distribution can be made.

both years. The death rate from all causes for the first 9 months of 1944 among persons insured in the industrial department of the Metropolitan Life Insurance Co. was about 5 percent above the rate for the corresponding period in 1943 and about 15 percent above the rate for the same period in 1942. The insured population includes a larger proportion of younger men so the war losses have relatively more effect upon the death rates for this group.

Infant mortality for the first 9 months of the year was the same in 1944 as in 1943 but lower than in 1942. During the first and third quarters of the year the rate was lower than in either of the 2 preceding years, but during the second quarter the rate was higher than in 1943 and the same as in 1942. In 21 of the 38 states with available data infant mortality was lower in 1944 than in 1943, in 15 it was higher, and in 2 States the rate was the same for the 2 years. The maternal mortality rate for the first 9 months of the year was 2.2 per 1,000 live births in 1944 as compared with 2.4 and 2.6 in the years 1943 and 1942, respectively. The rate was the same or below that of the 2 preceding years in each of the 3 quarters of 1944. Thirty of the thirty-eight States with available data reported lower maternal mortality rates in 1944 than in 1943.

While the birth rate remained at a comparatively high level, the rate for the first 9 months of 1944, 20.3 per 1,000 population, was 5 percent below the rate for the same period in 1943 but 3 percent above the 1942 rate. The birth rate for 1944 was below that of 1943 in each of the 3 quarters. Twenty-seven of the thirty-eight States reporting had a lower birth rate in 1944 than in 1943.

For the first 9 months of 1944 the influenza death rate was considerably higher than that for the corresponding period in 1943 and 1942. The excess in the influenza death rate occurred during the first quarter of the year, which included a large part of the deaths in the 1943-44 epidemic. During the second quarter the rate was lower than in 1943 but slightly higher than in 1942, while in the third quarter the rate was the lowest in the 3 years for which the data are presented. The pneumonia rate was the same as in 1943 and slightly higher than in 1942. The increase in the death rate from this disease which was seen in the first quarter of the year did not continue beyond that period. For the second quarter the rate was considerably below that in 1943 and during the third quarter the rate was the same as in 1943. Thirty-six of the forty States reporting had a higher death rate from influenza than in 1943, while only 18 had a higher death rate from pneumonia.

The tuberculosis death rate was lower in the first 9 months of 1944 than in the same period in each of the 2 preceding years. A comparison by quarters shows that the rate in the first quarter was higher in 1944 than in 1943, but in the second and third quarters the 1944 rate was lower than in either of the 2 preceding years. Sixteen of

the forty States reporting had a higher tuberculosis rate during the first 9 months of 1944 than in the same period of 1943; in the other 24 States the rate was lower than in 1943. However, the changes from year to year are very small in many States. In 5 of the 16 States which increased, the increase was less than 1.0 in the rate per 100,000; and in 4 of the 24 States which decreased, the decrease was less than 1.0 in the rate per 100,000. Five large industrial States, viz, New York, New Jersey, Pennsylvania, Michigan, and Illinois, all showed some increase in 1943 over the 1942 rates, but none of them increased in 1944 over the 1943 rates.

There was an increase in only 2 of the degenerative diseases during the first 9 months of 1944. The cancer rate in 1944 was higher than in 1943 and also 1942 for the 9 months as a whole and for each of the 3 quarters. For diseases of the heart the rate for the 9 months was 318 per 100,000 as compared with 313 and 290 for the same period in 1943 and 1942. The rate for diabetes was only slightly below the rate in 1943 but the nephritis rate was the lowest in the 3 years included in this summary.

Four of the communicable diseases had higher death rates in 1944 than in 1943—measles, meningococcus meningitis, poliomyelitis, and scarlet fever. During the first quarter of 1944 the death rate from meningococcus meningitis was higher than in the same quarter of the 2 preceding years, but in the second and third quarters the rates were below those of 1943 but definitely higher than in 1942. The poliomyelitis death rate was comparatively low during the first two quarters of 1944 but during the third quarter a serious outbreak of this disease occurred and the death rate was about 50 percent above the 1943 rate and more than 4 times the 1942 rate for the same quarter. Of the 40 States reporting, 23 had higher death rates in 1944 than in 1943 from meningococcus meningitis, and the same number of States had higher rates from poliomyelitis. The scarlet fever death rate was relatively high during the first and second quarters of 1944 but for the 9-month period as a whole the rate was only slightly above the 1943 and 1942 rates.

The death rate from all accidents for the first 9 months of 1944 was 65 per 100,000 population, as compared with 67 for the corresponding period in each of the 2 preceding years. The automobile death rate was 15.2 as compared with 14.2 in 1943 and 19.7 in 1942. The death rate from all accidents was lower for each quarter of 1944 than for the same period in the 2 preceding years; the automobile death rate was higher in the first and second quarters and lower in the third quarter of 1944 than in 1943, but all quarters were below the 1942 rates. Thirty-five States contributed to the increase in the automobile death rate in 1944 over that for the first 9 months of 1943. The death rate from accidents, other than automobile, dropped from 53 in the first 9 months of 1943 to 50 for the same period in 1944.

Provisional mortality from certain causes in the first 9 months of 1944, with comparative data for the corresponding period in preceding years

State and period	All causes, rate per 1,000 population (annual basis)		Births (exclusive of stillbirths) per 1,000 population (annual basis)		Rate per 1,000 live births		Death rate per 100,000 population (annual basis)																						
					Total infant mortality	Maternal mortality	Typhoid and paratyphoid fever (1-2)	Dysentery (27)	Diarrhea and enteritis under 2 years (119)	Scarlet fever (8)	Diphtheria (10)	Whooping cough (9)	Measles (35)	Cerebrospinal (meningococcus) meningitis (6)	Acute poliomyelitis and polioencephalitis (36)	Acute infectious encephalitis (lethargic) (37)	Tuberculosis, all forms (13-22)	Syphilis (30)	Influenza (grippe) (33)	Pneumonia, all forms (107-109)	Cancer, all forms (45-55)	Diabetes mellitus (61)	Intercranial lesions of vasculature origin (83)	Diseases of the heart (90-95)	Nephritis, all forms (130-132)	All accidents, including automobile accidents (169-195)	Automobile accidents (170a, b, c)		
40 States:																													
January-September 1944	10.6	20.3	40	2.2	0.40	0.19	6.9	0.35	0.51	1.37	1.81	2.33	1.08	0.50	40.6	10.4	15.3	48	129	27.0	94	318	69	65	15.2				
1943	10.2	21.4	40	2.4	0.50	1.26	7.0	0.34	0.66	2.55	1.11	2.04	0.79	50	41.8	10.9	8.8	45	125	27.1	89	310	73	67	14.2				
1942	10.6	19.8	41	2.6	0.51	1.28	6.3	0.34	0.66	1.80	1.01	2.06	0.84	39	41.9	11.0	8.0	45	128	26.4	94	290	71	87	19.7				
January-March 1944	11.9	19.5	43	2.3	0.23	0.43	3.9	0.52	0.74	1.39	2.62	3.61	1.16	58	43.2	11.2	37.2	76	129	31.0	104	265	78	65	16.4				
1943	11.5	21.1	44	2.3	0.28	0.47	4.1	0.49	0.66	2.38	1.16	2.47	1.18	60	41.5	11.8	15.2	72	124	28.8	103	338	80	63	13.8				
1942	11.1	19.1	45	2.7	0.34	0.75	3.4	0.49	0.63	1.91	1.51	2.62	1.22	39	43.3	11.9	15.2	68	124	28.9	99	328	79	67	22.5				
April-June 1944	10.4	19.4	41	2.2	0.28	1.09	6.1	0.42	0.68	1.19	2.45	2.37	0.22	50	41.5	10.6	6.8	42	130	26.9	93	315	69	64	14.0				
1943	10.8	20.6	39	2.4	0.36	1.09	6.1	0.37	0.89	2.75	1.77	2.52	0.27	52	44.8	11.0	8.3	45	126	27.9	96	321	79	69	13.1				
1942	10.0	18.7	41	2.5	0.46	1.04	5.5	0.33	0.81	1.81	1.29	2.71	0.14	41	44.2	11.2	6.4	41	122	26.2	87	267	70	66	18.1				
July-September 1944	9.5	17.7	36	2.1	0.67	2.02	10.7	0.12	0.43	1.53	0.37	1.04	2.84	41	37.3	9.3	2.3	26	126	23.6	84	274	61	67	15.0				
1943	9.6	23.3	37	2.4	0.85	2.22	10.7	0.18	0.94	2.52	0.40	1.15	1.90	48	39.1	9.8	2.8	26	126	23.6	84	267	63	69	16.8				
1942	9.4	21.4	37	2.6	0.73	2.03	9.9	0.20	0.45	1.68	0.24	1.44	0.64	38	38.5	10.1	2.5	27	122	22.2	81	257	63	68	18.7				
Industrial policy holders:																													
1944	8.3				2		4.6	0.5	0.6	6	0.9						41.2	9.6	10.3	36	109	28.8	67	232	47	54	13.6		
1943	7.9				3		4.5	0.4	0.7	1.3	0.7						40.9	9.9	6.6	36	106	28.5	66	231	51	52	12.2		
1942	7.3				3		4.2	0.4	0.5	1.0	0.6						42.4	10.9	4.3	29	105	28.1	60	213	50	51	17.3		

Alaska:	1944:	20.8	25.2	107	(^o)	(^o)	7.0	(^o)	1.75	59.66	28.07	5.26	(^o)	(^o)	394.3	1.8	64.4	166	81	225	26	365	14.0			
	1943:	21.1	103	108	1.75	64.92	15.79	1.75	63.2	16.79	5.26	(^o)	(^o)	363.2	8.8	45.6	183	105	221	26	319	8.8				
	1942:	18.3	25.4	111	(^o)	15.79	52.64	3.51	(^o)	(^o)	3.51	(^o)	(^o)	356.2	3.5	22.8	81	7.0	103	30	297	15.8				
Canal Zone:	1944:	7.6	21.0	36	6.0	(^o)	(^o)	4.8	(^o)	(^o)	(^o)	(^o)	(^o)	29.0	26.6	(^o)	24	87	36	92	31	179	19.3			
	1943:	10.6	19.5	46	5.0	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	(^o)	48.4	21.8	(^o)	19	63	34	111	39	412	48.4			
Colorado:	1944:	10.6	21.9	49	2.1	47	2.68	9.3	1.98	3.03	2.68	2.68	1.40	35	43.0	8.7	15.8	73	85	282	65	88	16.8			
	1943:	10.9	21.3	48	2.2	23	3.10	11.4	1.48	3.79	3.10	2.63	2.40	34	52.5	9.8	11.6	71	121	86	298	72	93	14.5		
	1942:	11.1	22.3	46	1.8	48	2.89	10.6	1.08	2.89	1.81	.72	.48	60	51.7	10.1	8.6	76	120	96	296	77	92	26.5		
Connecticut:	1944:	10.4	18.3	32	1.5	08	.23	1.7	.08	.68	.23	3.16	3.8	23	36.2	7.0	5.5	37	156	32.8	59	69	11.0			
	1943:	9.7	19.1	28	1.5	08	.23	3.5	.08	.45	.48	1.43	1.13	60	31.8	6.7	2.9	33	138	20.1	62	54	11.0			
	1942:	8.9	16.8	30	2.2	.07	(^o)	2.5	(^o)	.37	.30	.45	(^o)	.07	33.0	6.4	1.7	24	130	27.4	79	291	58	13.6		
Delaware:	1944:	11.2	21.4	45	1.3	(^o)	.94	17.0	(^o)	47	.94	2.83	1.41	.47	44.8	15.1	19.8	50	111	29.2	91	123	68	22.6		
	1943:	11.2	20.4	39	2.2	.48	(^o)	7.1	(^o)	5.71	.48	8.56	(^o)	.96	43.3	14.3	8.6	64	109	33.2	103	130	68	22.6		
	1942:	11.0	19.1	38	1.5	(^o)	9.6	12.9	1.92	4.95	(^o)	51.8	(^o)	.86	51.8	14.4	8.8	64	125	30.7	104	128	71	27.0		
Dist. of Columbia:	1944:	9.4	24.7	38	1.6	.43	8.7	8.7	.43	(^o)	.58	2.02	1.88	14	57.9	17.8	2.5	47	125	22.1	61	260	79	46	9.5	
	1943:	10.6	26.1	41	1.5	.80	12.9	10.5	1.05	5.26	.76	3.61	.30	(^o)	56.8	14.9	3.9	56	135	28.1	57	281	90	52	8.7	
	1942:	10.2	23.3	45	2.5	.81	16.5	16.5	.16	2.63	(^o)	1.85	.30	(^o)	57.9	19.5	2.3	57	126	28.8	67	262	86	63	14.5	
Florida:	1944:	10.2	20.6	43	3.5	.62	1.52	6.4	(^o)	1.02	.85	2.09	.45	.45	33.9	15.6	21.0	46	93	18.5	93	239	75	109	22.0	
	1943:	9.9	18.4	48	4.0	.98	1.52	8.1	.23	1.07	2.71	4.0	.28	.40	35.3	14.2	18.8	44	85	18.2	93	217	71	116	19.2	
	1942:	10.5	17.3	52	4.8	1.88	1.75	7.8	.06	1.06	2.81	.69	.19	.08	40.5	18.0	13.5	47	90	18.0	102	244	72	98	25.4	
Georgia:	1944:	8.2	21.9	44	3.6	.79	1.87	10.1	.04	.37	2.20	1.82	.25	.08	31.5	11.0	13.0	44	63	11.1	89	162	83	52	16.6	
	1943:	8.4	22.6	52	4.1	.75	2.49	9.7	.17	1.04	6.05	1.24	.04	.21	37.4	12.4	14.5	48	60	12.4	87	161	90	57	15.3	
	1942:	8.5	20.7	52	4.1	.75	2.70	8.6	.08	1.00	3.16	2.33	.46	.08	37.8	13.5	14.8	49	62	10.8	84	155	92	59	19.3	
Hawaii:	1944:	8.7	28.0	31	2.5	.80	.60	3.9	(^o)	.30	2.42	1.51	(^o)	(^o)	66.2	14.5	3.3	35	87	17.8	44	143	56	177	34.5	
	1943:	7.6	23.2	40	1.5	.80	.30	7.0	(^o)	.30	4.23	.60	(^o)	.30	57.1	13.9	5.4	39	77	18.1	47	131	52	119	20.9	
	1942:	7.4	25.2	40	2.7	1.81	(^o)	6.0	.30	.30	3.93	.30	(^o)	(^o)	58.0	13.0	3.0	46	65	16.6	46	134	60	99	18.7	
Idaho:	1944:	8.5	23.4	28	(^o)	.60	1.51	1.5	1.26	(^o)	.75	5.03	.25	(^o)	14.8	(^o)	19.4	61	82	8.8	64	254	51	84	18.4	
	1943:	9.0	22.6	33	2.3	.81	.81	.6	.54	1.07	3.22	3.76	2.42	.54	16.9	3.2	12.1	53	91	14.5	79	244	43	97	23.3	
	1942:	9.6	23.7	34	2.2	1.40	(^o)	(^o)	.6	.84	.84	1.40	(^o)	.28	14.3	3.1	10.1	55	88	15.7	93	263	58	97	23.8	
Illinois:	1944:	11.2	17.5	33	1.8	.19	.48	2.4	.35	.55	1.38	2.66	.40	.43	40.3	10.5	7.9	35	188	33.0	85	392	78	59	14.7	
	1943:	11.5	19.5	34	2.0	.44	.43	3.8	.30	1.13	1.44	.85	1.72	2.21	47	43.0	10.7	4.9	37	155	32.0	91	392	86	62	14.5
	1942:	10.9	17.7	35	2.0	.27	.73	2.8	.30	1.25	.55	.22	.32	.25	40.8	10.5	4.4	39	147	30.4	83	382	81	65	21.2	
Indiana:	1944:	10.8	19.6	34	2.2	.59	.39	5.8	.43	.66	.98	1.45	.82	.39	32.9	8.4	27.1	50	127	13.8	140	282	79	71	18.3	
	1943:	11.4	21.1	40	2.3	.31	.43	8.9	.55	3.82	2.60	1.46	.51	.51	34.2	9.0	18.1	46	124	15.4	144	294	88	72	17.6	
	1942:	10.5	18.8	38	2.8	.23	.38	6.4	.46	.34	1.95	.42	.57	.34	35.4	9.7	12.8	47	119	12.8	131	243	76	76	27.6	
Iowa:	1944:	11.4	19.9	35	1.9	.24	.06	2.7	1.06	1.24	1.30	.77	.41	.24	15.8	6.7	25.9	46	154	26.6	69	352	79	71	13.8	
	1943:	10.8	20.4	34	1.7	.12	.23	2.4	.87	1.79	.98	.68	.75	.29	16.1	7.0	8.2	30	149	28.7	120	336	64	71	11.5	
	1942:	10.1	19.2	34	2.2	(^o)	.22	2.4	.28	1.21	.77	.66	.08	.28	16.1	6.3	8.6	38	148	28.6	113	293	62	68	17.0	

See footnotes at end of table.

Provisional mortality from certain causes in the first 9 months of 1944, with comparative data for the corresponding period in preceding years—Continued

State and period	Rate per 1,000 live births		All causes, rate per 1,000 population (annual basis)	Births (exclusive of stillbirths) per 1,000 population (annual basis)	Death rate per 100,000 population (annual basis)																		
	Total infant mortality	Maternal mortality			Typhoid and paratyphoid fever (1-2)	Dysentery (27)	Diarrhea and enteritis under 2 years (119)	Scarlet fever (8)	Diphtheria (10)	Whooping cough (9)	Measles (35)	Cerebrospinal meningitis (6)	Acute poliomyelitis and polioencephalitis (36)	Acute infectious encephalitis (37)	Tuberculosis, all forms (13-22)	Gyphitis (30)	Influenza (grippe) (33)	Pneumonia, all forms (107-109)	Cancer, all forms (45-55)	Diabetes mellitus (61)	Intracranial lesions of vascular origin (63)	Diseases of the heart (90-95)	Nephritis, all forms (130-132)
40 States 1—Con.					0.45	0.90	0.90	0.90	0.90	1.68	1.68	1.68	1.51	10.2	24.7	37	133	27.0	104	311	87	81	16.1
Kansas:					0.45	0.90	0.90	0.90	0.90	1.68	1.68	1.68	1.51	10.2	24.7	37	133	27.0	104	311	87	81	16.1
1944	33	2.2	0.06	0.45	3.0	0.90	0.90	0.90	0.90	1.68	1.68	1.51	10.2	24.7	37	133	27.0	104	311	87	81	16.1	
1943	34	2.2	0.23	0.38	2.7	1.05	0.75	2.03	0.53	1.68	4.13	1.26	10.0	12.6	35	131	26.4	117	347	232	87	90	16.4
1942	36	2.6	0.23	0.53	4.1	0.38	1.15	1.07	1.60	0.31	0.76	0.99	11.1	15.1	32	128	27.2	114	292	242	87	78	21.3
Kentucky:					0.45	0.90	0.90	0.90	0.90	1.68	1.68	1.51	10.2	24.7	37	133	27.0	104	311	87	81	16.1	
1944	49	2.2	0.81	4.52	12.6	0.30	1.02	3.76	2.54	0.81	1.78	0.61	9.0	29.5	59	90	17.4	100	249	69	64	14.7	
1943	51	2.2	1.42	5.58	15.2	0.39	0.78	4.40	4.65	1.44	4.49	0.61	9.6	17.4	60	84	14.2	96	242	73	56	11.3	
1942	53	3.1	1.49	5.46	13.9	0.91	1.39	4.03	1.05	0.96	0.91	0.24	9.4	16.3	58	95	14.0	90	226	80	70	18.3	
Louisiana:					0.45	0.90	0.90	0.90	0.90	1.68	1.68	1.51	10.2	24.7	37	133	27.0	104	311	87	81	16.1	
1944	48	2.8	1.21	2.27	8.3	1.11	1.74	1.74	2.95	1.79	0.69	0.05	19.3	20.6	46	90	15.6	72	238	66	64	17.1	
1943	46	3.3	1.46	1.41	6.7	0.78	1.41	2.47	4.63	0.94	0.47	0.21	15.8	18.0	50	83	15.9	71	232	65	53	15.4	
1942	53	3.6	1.84	1.63	8.0	1.10	1.21	2.47	1.47	0.79	0.47	0.16	14.6	21.1	49	82	15.6	63	216	67	47	17.6	
Maine:					0.45	0.90	0.90	0.90	0.90	1.68	1.68	1.51	10.2	24.7	37	133	27.0	104	311	87	81	16.1	
1941	48	1.8	0.34	0.17	8.8	0.17	0.34	0.01	2.02	0.20	0	0.34	33.2	5.6	57	162	28.3	139	369	94	87	13.1	
1943	48	2.3	0.46	0	9.5	0.16	0.40	2.94	3.33	0.30	0.40	0.30	31.7	7.8	64	157	28.3	141	397	67	77	13.4	
1942	43	2.0	0.32	0.16	7.8	0.97	0.32	2.26	1.78	2.58	0.32	0.65	32.9	6.1	54	163	29.7	128	365	81	83	19.1	
Maryland:					0.45	0.90	0.90	0.90	0.90	1.68	1.68	1.51	10.2	24.7	37	133	27.0	104	311	87	81	16.1	
1944	44	1.7	0.13	0.38	9.4	0.19	0.75	1.51	1.51	2.68	1.13	0.38	13.6	8.6	49	122	29.9	89	320	97	65	16.7	
1943	42	1.7	0.32	0.77	10.7	0.13	0.45	2.56	0.88	2.93	0.88	0.38	15.0	4.2	56	127	26.4	88	336	108	72	16.1	
1942	46	1.9	0.40	0.94	11.0	0.13	0.13	1.41	0.80	2.94	0	0.47	17.7	4.8	53	126	27.3	96	319	103	76	21.6	
Massachusetts:					0.45	0.90	0.90	0.90	0.90	1.68	1.68	1.51	10.2	24.7	37	133	27.0	104	311	87	81	16.1	
1944	32	1.9	0.06	0.10	2.6	0.35	0.16	0.29	0.58	2.22	0.29	0.42	43.4	5.7	67	194	37.3	112	451	60	66	11.4	
1943	32	1.9	0.22	0.88	4.7	0.60	0.19	0.83	0.60	2.93	0.47	0.19	42.9	6.9	70	174	35.7	114	456	65	70	10.1	
1942	32	1.9	0.06	0.06	2.3	0.28	0.18	0.80	0.46	2.77	0.6	0.28	38.4	9.3	53	172	35.7	106	400	69	61	12.1	

Michigan:	10.0	20.6	39	1.7	.22	.59	5.2	.12	.44	.66	1.21	2.34	.86	.49	33.8	10.5	9.3	45	128	28.3	92	310	51	61	18.8
1944	10.2	16.2	38	1.9	.15	.39	6.0	.22	.31	2.15	1.95	2.12	.44	.22	35.0	10.8	6.4	50	125	27.0	85	319	53	61	16.2
1943	9.4	21.7	37	2.1	.12	.60	4.0	.45	.31	2.15	1.95	2.12	.44	.22	35.0	10.8	6.4	50	125	27.0	85	319	53	61	16.2
1942	10.7	22.1	33	1.4	(*)	.21	3.7	.48	.31	.85	3.41	1.76	1.39	.75	27.8	4.5	14.3	56	155	20.6	105	323	39	67	13.6
1944	10.3	23.1	31	1.5	(*)	.05	1.8	.36	.57	1.09	.67	.73	.47	.73	20.4	7.1	5.1	48	154	28.1	106	302	42	64	10.3
1943	9.7	21.5	30	1.5	(*)	.20	2.7	.25	.25	.70	.55	.20	.30	.55	26.8	6.7	7.6	47	145	26.5	94	281	43	66	17.9
1942	11.9	20.6	35	2.2	.82	1.12	5.3	.41	.52	1.97	2.46	3.17	.56	.37	43.2	13.4	23.6	70	150	25.7	107	351	102	66	14.6
1944	11.8	22.0	37	2.0	1.00	1.32	6.4	.64	1.18	2.50	1.63	4.66	1.21	.31	46.4	14.2	9.2	73	140	27.0	103	339	109	72	12.9
1943	11.2	19.1	40	2.7	.81	1.30	5.3	.35	.46	1.16	1.68	4.66	1.21	.31	46.4	14.2	9.2	73	140	27.0	103	339	109	71	18.9
1942	12.0	23.5	37	1.7	.29	.58	6.6	.29	2.01	2.30	4.03	5.8	1.73	1.15	37.4	16.1	13.2	48	142	29.0	109	351	60	105	19.8
1944	11.5	23.6	41	1.8	.65	1.66	5.0	.65	1.10	2.31	1.66	5.5	1.83	1.10	42.2	9.1	7.5	53	122	19.6	88	298	63	124	19.9
1943	10.4	22.1	37	2.1	(*)	.28	3.4	.78	1.04	2.34	(*)	1.30	(*)	1.04	38.4	11.9	6.5	42	124	14.0	100	276	60	90	21.3
1942	10.3	20.1	32	1.7	.11	.33	3.1	.88	.66	1.76	.88	1.54	.77	.44	17.4	6.8	24.1	42	134	26.7	104	292	71	90	13.1
1944	10.3	20.9	43	1.6	(*)	.25	3.1	.66	.54	2.29	1.52	.96	1.06	.22	16.7	8.3	11.0	39	138	31.6	100	289	76	75	14.4
1943	9.6	18.4	32	1.8	.11	.22	1.9	.43	.65	1.13	.75	.32	1.31	.32	13.7	8.0	11.1	34	138	27.0	94	273	67	67	16.8
1942	10.3	20.9	43	1.6	(*)	.25	3.1	.66	.54	2.29	1.52	.96	1.06	.22	16.7	8.3	11.0	39	138	31.6	100	289	76	75	14.4
1944	12.4	18.3	59	.5	1.97	5.90	10.8	.98	(*)	6.89	1.97	1.97	.98	1.97	54.1	11.8	5.9	56	104	12.8	88	314	55	206	73.8
1943	12.9	18.7	36	2.5	.29	(*)	2.0	.58	(*)	1.17	1.75	2.34	2.63	.29	23.4	7.6	19.9	63	180	38.9	125	441	78	75	11.7
1942	11.2	17.7	35	1.7	.13	.10	5.0	.29	.16	.22	.38	2.86	1.35	.96	41.4	9.4	6.3	43	153	35.2	98	383	69	59	13.9
1944	11.3	19.6	33	1.6	.25	.09	4.2	.25	.26	.98	.66	3.32	.22	.51	45.6	8.2	6.4	44	145	36.9	98	392	70	63	15.4
1943	10.6	18.1	32	1.9	.12	.44	2.7	.19	.12	.94	.19	.53	.53	.53	43.7	9.3	3.2	39	150	34.3	89	357	67	62	17.3
1942	10.5	30.5	81	4.0	.75	13.8	34.7	.25	3.01	2.01	8.29	1.26	(*)	50	78.6	9.3	20.1	61	60	12.8	52	141	52	109	20.9
1944	10.5	30.5	85	4.8	.50	14.8	44.6	.25	1.75	6.01	3.76	1.25	1.25	.25	74.6	11.5	12.0	57	70	10.3	43	129	47	128	18.5
1943	9.8	26.5	94	3.9	1.01	9.1	32.4	(*)	1.52	7.93	7.83	.76	1.76	1.01	58.1	10.4	14.9	66	53	6.8	40	125	47	82	27.5
1942	12.1	18.3	33	1.9	.23	.20	3.6	.13	.04	.44	.41	2.92	2.79	1.05	49.8	12.9	4.7	50	179	42.4	80	480	57	54	11.6
1944	12.3	20.0	32	2.0	.12	.20	3.7	.26	.20	1.25	.87	2.75	.23	1.19	50.5	13.9	3.0	50	172	41.8	82	481	62	60	12.0
1943	11.3	18.0	32	2.2	.16	.23	3.1	.16	.08	1.05	.12	.79	.19	.89	45.2	14.2	1.8	40	171	40.1	75	401	57	61	15.8
1942	8.4	26.1	45	3.0	.85	1.13	13.4	.23	.72	4.05	2.31	1.48	1.32	.19	39.0	6.8	18.7	45	65	14.0	86	183	82	61	17.1
1944	8.6	26.4	46	3.5	.62	1.62	12.2	.15	1.58	3.05	.55	1.58	.26	.11	40.0	6.8	11.0	47	63	12.1	86	171	78	59	17.3
1943	8.2	23.9	51	3.8	.62	1.80	13.3	.37	.94	3.19	2.02	.62	.26	.11	46.1	7.7	8.5	48	60	12.6	86	163	81	66	24.6
1942	10.1	26.6	39	2.2	(*)	.25	4.1	.27	.25	2.03	8.86	1.27	.76	3.29	17.5	3.8	18.0	47	119	30.1	101	266	53	68	16.2
1944	8.6	26.2	30	2.5	(*)	.74	2.5	3.2	(*)	2.25	2.74	1.23	.25	2.22	23.4	3.9	5.2	36	110	23.4	82	232	54	59	11.3
1943	7.8	21.4	38	2.8	.23	.46	6.6	.46	.23	2.29	2.06	.23	.23	2.06	23.1	3.0	4.3	36	100	20.8	81	189	40	43	14.9
1942	11.5	18.9	40	1.9	.29	.33	6.9	.57	.29	1.45	2.76	2.80	1.31	.47	40.7	11.7	20.3	47	144	34.5	121	351	69	72	16.8
1944	11.5	20.5	40	2.1	.62	.31	7.4	.50	.54	2.10	.91	1.24	.21	.52	40.6	12.5	11.4	50	140	31.2	118	345	73	76	15.8
1943	10.9	19.2	39	2.0	.25	.29	6.0	.42	.25	2.06	.54	.13	.33	.21	41.2	11.7	9.0	46	135	30.9	105	315	76	81	27.2

See footnotes at end of table.

Provisional mortality from certain causes in the first 9 months of 1944, with comparative data for the corresponding period in preceding years—
Continued

State and period	All causes, rate per 1,000 population (annual basis)		Births (exclusive of stillbirths) per 1,000 population (annual basis)	Rate per 1,000 live births		Death rate per 100,000 population (annual basis)																					
	Total infant mortality	Maternal mortality		Total infant mortality	Maternal mortality	Typhoid fever (1-2)	Dysentery (27)	Diarrhea and enteritis under 2 years (119)	Scarlet fever (8)	Diphtheria (10)	Whooping cough (9)	Measles (35)	Cerebrospinal meningitis (6)	Acute poliomyelitis and polioencephalitis (36)	Acute infectious encephalitis (lethargic) (37)	Tuberculosis, all forms (13-22)	Syphilis (30)	Influenza (grippe) (33)	Pneumonia, all forms (107-109)	Cancer, all forms (45-55)	Diabetes mellitus (61)	Intraocular lesions of vasculature origin (63)	Diseases of the heart (90-95)	Nephritis, all forms (130-132)	All accidents, including automobile accidents (100-195)	Automobile accidents (170a, b, c)	
40 States 1—Con.																											
Oklahoma:																											
1944.....	41	2.6	22.7	9.2	0.52	2.85	6.0	0.26	0.97	2.07	2.14	0.52	0.58	0.19	43.5	8.2	21.1	46	99	15.5	92	208	54	73	14.5		
1943.....	48	2.8	20.1	9.0	1.17	2.41	5.9	.31	1.99	4.50	2.25	1.97	1.48	.49	42.2	10.0	10.8	43	89	17.0	94	194	57	75	12.7		
1942.....	41	3.7	20.0	9.6	1.63	3.20	4.7	.18	1.51	2.48	6.04	2.42	.66	.64	49.4	7.3	13.6	50	96	16.8	91	204	58	67	18.2		
Oregon:																											
1944.....	31	1.7	20.5	10.9	.44	(¹)	0.9	.88	.44	.44	.88	2.42	2.31	(¹)	26.4	11.7	14.5	45	139	21.3	103	241	81	97	19.8		
Pennsylvania:																											
1944.....	39	1.7	19.3	11.6	.20	4.0	5.9	.45	.19	.84	1.23	2.27	1.27	.01	39.6	9.4	17.6	50	140	35.3	95	365	85	50	11.2		
1943.....	35	1.9	21.5	11.5	.31	4.2	4.3	.30	.25	2.10	.68	1.92	1.16	.04	39.8	10.5	7.5	47	135	35.8	95	367	91	53	11.4		
1942.....	36	1.4	20.5	10.9	.33	.21	3.7	.37	1.2	1.31	.55	.69	.19	.21	39.6	10.3	6.4	41	129	33.3	87	341	85	62	15.4		
Rhode Island:																											
1944.....	39	1.7	17.7	10.9	.34	1.7	5.0	.17	.34	1.03	1.20	2.23	.34	.69	35.7	8.4	5.3	54	135	37.8	88	399	77	63	7.9		
1943.....	42	2.1	20.2	11.7	.18	1.8	7.1	.53	.36	1.60	.18	1.84	1.07	.38	37.7	9.3	3.9	52	152	42.7	91	395	96	63	9.1		
1942.....	40	2.2	18.2	10.5	.18	(¹)	6.6	.18	.64	1.08	.72	.36	1.18	1.07	38.3	9.2	2.3	49	141	35.5	94	354	79	55	10.6		
South Carolina:																											
1944.....	51	3.4	21.5	7.1	1.39	1.53	7.4	.07	.63	4.52	2.29	1.32	.49	.35	26.6	11.1	16.7	39	140	12.4	68	140	69	60	16.8		
1943.....	48	4.2	25.0	7.4	2.88	2.88	6.9	.07	1.03	3.36	3.15	1.75	.34	.14	32.4	13.5	12.5	42	45	10.8	75	135	70	47	12.6		
1942.....	56	5.5	22.9	8.1	2.06	1.72	7.6	(¹)	2.12	4.06	2.12	.73	.27	.13	36.0	12.2	13.9	51	50	11.1	84	154	92	58	19.0		
South Dakota:																											
1944.....	32	1.2	24.0	9.9	.48	(¹)	2.9	.48	1.44	1.68	3.35	.96	.24	.24	33.5	5.5	18.1	48	118	20.6	90	260	48	82	17.2		
1943.....	33	1.0	24.5	9.5	.26	.26	2.3	.63	1.16	2.32	4.03	.70	(¹)	1.62	28.5	3.7	8.5	45	113	21.8	80	227	55	89	10.4		
1942.....	39	2.4	20.5	9.2	.91	(¹)	3.2	.23	3.19	6.38	2.72	.91	(¹)	.46	28.7	5.5	6.6	46	112	20.8	93	222	54	67	16.4		

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

REPORTS FROM STATES FOR WEEK ENDED APRIL 14, 1945

Summary

A total of 36 cases of poliomyelitis was reported for the week, as compared with 31 last week and 20 for the corresponding week last year. States reporting the largest numbers (last week's figures in parentheses) are as follows: New York 9 (6), Alabama 9 (7), Michigan 4 (0), Texas 3 (0). The current week's total is the largest on record (since 1927) for a corresponding week, and the cumulative total for the first 15 weeks of the year, 521 cases, is more than reported for any corresponding period since 1928, when the figure was 638.

The trend of meningococcus meningitis incidence has continued downward, with fluctuations, since the week ended February 24, when 290 cases were reported, the largest weekly total so far this year. The total for the current week is 194 cases, as compared with 191 last week, 466 and 605, respectively, for the corresponding weeks of last year and 1943, and a 5-year (1940-44) median of 88. The largest numbers were reported in California (22), New York and Illinois (17 each), and Pennsylvania (13). The total for the country as a whole to date is 3,617, as compared with 8,143 for the corresponding period last year, and a 5-year median of 1,152.

The cumulative totals for the first 15 weeks of the year for certain other diseases are as follows (last year's corresponding figures in parentheses): Diphtheria 4,478 (3,588), dysentery (all forms) 8,971 (4,439), infectious encephalitis 106 (150), influenza 54,658 (324,632), measles 40,379 (367,638), scarlet fever 83,831 (91,350), smallpox 160 (184), tularemia 267 (150), typhoid and paratyphoid fever 834 (1,078), endemic typhus fever 728 (569), undulant fever 1,287 (610), whooping cough 36,627 (27,196).

A total of 9,152 deaths was recorded for the week in 93 large cities of the United States, as compared with 9,121 last week, 9,572 for the corresponding week last year, and a 3-year (1942-44) average of 9,450. The cumulative total is 144,516, as compared with 151,152 for the corresponding period last year.

Telegraphic morbidity reports from State health officers for the week ended April 14, 1945, and comparison with corresponding week of 1944, and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Me-dian 1940-44	Week ended—		Me-dian 1940-44	Week ended—		Me-dian 1940-44	Week ended—		Me-dian 1940-44
	Apr. 14, 1945	Apr. 15, 1944		Apr. 14, 1945	Apr. 15, 1944		Apr. 14, 1945	Apr. 15, 1944		Apr. 14, 1945	Apr. 15, 1944	
NEW ENGLAND												
Maine.....	0	0	0	2	2	1	317	135	0	9	5	
New Hampshire.....	0	1	0	-----	-----	1	8	34	0	2	0	
Vermont.....	1	0	0	-----	-----	8	156	100	0	0	0	
Massachusetts.....	9	8	4	-----	-----	203	1,013	1,013	8	5	2	
Rhode Island.....	0	1	0	43	26	7	195	156	1	4	0	
Connecticut.....	2	0	0	7	3	123	612	430	0	7	2	
MIDDLE ATLANTIC												
New York.....	14	7	19	11	12	14	77	2,317	2,317	17	40	16
New Jersey.....	6	3	4	6	7	9	49	1,831	1,831	3	18	4
Pennsylvania.....	10	10	12	3	2	-----	238	898	1,264	13	33	9
EAST NORTH CENTRAL												
Ohio.....	18	2	6	11	29	14	36	1,183	1,183	9	22	1
Indiana.....	2	2	3	1	7	22	14	224	224	4	8	1
Illinois.....	3	17	17	2	92	30	126	1,281	1,281	17	42	1
Michigan ¹	18	6	6	-----	1	8	135	812	812	5	35	3
Wisconsin.....	0	4	1	10	37	56	52	2,758	1,622	2	6	1
WEST NORTH CENTRAL												
Minnesota.....	1	0	2	-----	3	2	14	1,116	178	7	8	1
Iowa.....	4	8	7	-----	38	9	39	204	309	6	2	1
Missouri.....	5	3	3	1	1	2	21	458	392	5	19	6
North Dakota.....	0	1	1	-----	20	7	5	81	55	0	0	0
South Dakota.....	4	2	2	-----	-----	-----	36	40	17	2	2	0
Nebraska.....	2	0	0	1	1	1	25	166	166	2	0	0
Kansas.....	2	2	4	-----	1	5	54	689	623	3	3	2
SOUTH ATLANTIC												
Delaware.....	1	1	0	-----	-----	-----	3	12	13	0	4	1
Maryland ¹	6	5	1	3	10	10	62	869	215	10	12	8
District of Columbia.....	0	0	0	2	-----	1	4	195	83	1	2	2
Virginia.....	4	4	4	123	274	277	55	1,094	488	8	9	7
West Virginia.....	3	1	5	12	2	9	73	583	159	2	6	4
North Carolina.....	2	10	10	3	14	31	1,486	1,130	8	9	4	
South Carolina.....	7	3	4	195	219	411	28	304	251	2	1	1
Georgia.....	1	1	7	8	43	80	16	299	299	4	5	1
Florida.....	3	1	3	-----	79	16	9	326	297	0	3	0
EAST SOUTH CENTRAL												
Kentucky.....	3	2	4	1	4	4	26	81	126	7	10	0
Tennessee.....	1	3	4	26	43	78	11	285	293	2	25	2
Alabama.....	8	8	8	38	87	119	25	430	243	2	13	6
Mississippi ¹	5	2	5	-----	-----	-----	-----	-----	-----	1	12	8
WEST SOUTH CENTRAL												
Arkansas.....	1	1	4	42	35	53	44	437	193	2	3	1
Louisiana.....	2	2	9	16	7	16	37	163	163	2	8	1
Oklahoma.....	2	3	5	79	76	105	27	304	136	1	5	1
Texas.....	35	23	28	778	583	690	535	3,401	2,194	6	12	7
MOUNTAIN												
Montana.....	0	2	1	2	5	3	17	124	106	0	1	0
Idaho.....	0	0	0	1	-----	1	3	78	67	0	1	0
Wyoming.....	1	0	0	-----	-----	-----	13	80	79	1	3	0
Colorado.....	2	4	12	4	31	25	38	225	279	0	6	1
New Mexico.....	3	0	1	-----	2	2	16	175	65	0	2	1
Arizona.....	1	2	1	54	61	100	13	348	77	0	3	0
Utah ¹	0	0	0	2	22	6	164	15	207	0	2	0
Nevada.....	0	0	0	-----	-----	-----	4	16	16	0	1	0
PACIFIC												
Washington.....	18	5	1	2	4	3	58	133	209	3	3	0
Oregon.....	12	10	3	13	26	11	66	134	354	6	0	0
California.....	22	22	13	20	29	186	1,536	2,795	1,203	22	40	1
Total.....	244	192	243	1,507	1,917	2,842	4,179	30,769	27,161	194	466	88
15 weeks.....	4,478	3,588	4,370	54,658	324,632	155,283	40,379	367,638	262,946	3,617	8,143	1,152

¹ New York City only.

² Period ended earlier than Saturday.

Telegraphic morbidity reports from State health officers for the week ended April 14, 1945, and comparison with corresponding week of 1944 and 5-year median—Con.

Division and State	Pollomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever ¹		
	Week ended—		Median 1940-44	Week ended—		Median 1940-44	Week ended—		Median 1940-44	Week ended—		Median 1940-44
	Apr. 14, 1945	Apr. 15, 1944		Apr. 14, 1945	Apr. 15, 1944		Apr. 14, 1945	Apr. 15, 1944		Apr. 14, 1945	Apr. 15, 1944	
NEW ENGLAND												
Maine.....	0	0	0	41	59	14	0	0	0	0	2	1
New Hampshire.....	0	0	0	15	4	7	0	0	0	0	0	0
Vermont.....	0	0	0	7	11	5	0	0	0	0	0	0
Massachusetts.....	0	0	0	366	450	450	0	0	0	1	0	0
Rhode Island.....	0	0	0	45	15	12	0	0	0	0	0	0
Connecticut.....	0	0	0	71	106	97	0	0	0	0	0	2
MIDDLE ATLANTIC												
New York.....	9	2	1	522	535	635	0	0	0	3	4	4
New Jersey.....	1	0	0	133	401	220	0	0	0	0	0	1
Pennsylvania.....	2	2	0	578	710	420	0	0	0	4	5	6
EAST NORTH CENTRAL												
Ohio.....	0	0	0	262	609	310	0	1	1	1	1	2
Indiana.....	0	0	0	105	177	137	3	0	0	3	2	1
Illinois.....	1	1	0	284	519	426	2	1	1	2	6	4
Michigan ²	4	1	0	238	352	306	0	0	0	0	3	1
Wisconsin.....	1	0	0	168	373	148	0	0	1	0	0	1
WEST NORTH CENTRAL												
Minnesota.....	0	1	0	87	182	71	0	0	0	0	0	0
Iowa.....	0	0	0	60	317	57	1	0	1	0	0	1
Missouri.....	0	0	0	47	197	116	0	0	3	0	0	0
North Dakota.....	0	0	0	39	40	7	0	0	0	0	0	0
South Dakota.....	0	0	0	20	35	19	0	0	0	0	0	0
Nebraska.....	1	0	0	58	26	26	0	0	0	0	0	0
Kansas.....	0	0	0	82	97	56	1	0	0	0	0	0
SOUTH ATLANTIC												
Delaware.....	0	0	0	13	19	19	0	0	0	0	0	0
Maryland ²	0	0	0	173	242	63	0	0	0	0	0	1
District of Columbia.....	0	0	0	28	135	18	0	0	0	0	0	0
Virginia.....	0	1	0	82	107	39	0	0	0	0	5	2
West Virginia.....	0	0	0	42	82	38	0	0	0	0	10	4
North Carolina.....	0	1	0	63	39	28	0	0	0	3	2	2
South Carolina.....	0	0	0	7	2	3	0	0	0	1	0	1
Georgia.....	0	0	0	23	29	15	0	0	0	4	4	3
Florida.....	1	0	0	10	10	5	0	0	0	1	0	1
EAST SOUTH CENTRAL												
Kentucky.....	0	0	1	45	96	79	0	1	0	4	1	4
Tennessee.....	2	0	1	27	116	80	0	0	0	8	1	1
Alabama.....	9	1	0	16	17	15	0	0	0	2	0	1
Mississippi ²	0	0	0	13	16	10	0	0	0	0	0	1
WEST SOUTH CENTRAL												
Arkansas.....	0	0	0	10	6	6	1	0	3	3	1	1
Louisiana.....	0	0	0	13	8	7	0	2	0	3	4	4
Oklahoma.....	1	0	0	9	22	17	1	2	0	0	4	1
Texas.....	3	4	1	91	84	56	1	1	1	7	0	4
MOUNTAIN												
Montana.....	0	0	0	15	60	30	0	0	0	0	0	0
Idaho.....	0	0	0	28	34	16	0	0	0	0	0	0
Wyoming.....	0	0	0	41	22	15	0	0	0	0	0	0
Colorado.....	0	0	0	45	58	44	0	0	0	0	1	0
New Mexico.....	0	0	1	17	10	10	0	0	0	1	3	1
Arizona.....	0	0	0	35	23	7	0	2	0	2	2	0
Utah ²	0	0	0	30	93	16	0	0	0	0	0	0
Nevada.....	0	0	0	0	3	4	0	0	0	0	0	0
PACIFIC												
Washington.....	0	1	1	71	320	44	0	0	0	0	0	1
Oregon.....	0	0	0	41	147	14	0	0	1	0	1	1
California.....	1	5	2	444	223	129	0	0	0	0	5	3
Total	36	20	18	4,660	7,238	4,483	10	10	24	53	67	72
15 weeks.....	521	331	371	83,831	91,350	59,767	160	184	395	834	1,078	1,126

¹ Period ended earlier than Saturday.

² Including paratyphoid fever reported separately as follows: New York 1; Texas 1.

Telegraphic morbidity reports from State health officers for the week ended April 14, 1945, and comparison with corresponding week of 1944 and 5-year median—Con.

Division and State	Whooping cough			Week ended Apr. 14, 1945							
	Week ended—		Median 1940-44	Dysentery			En- ceph- alitis, infec- tious	Rocky Mt. spot- ted fever	Tula- remia	Ty- phus fever	Un- dan- tant fever
	Apr. 14, 1945	Apr. 15, 1944		Ame- bic	Bacil- lary	Un- spec- ified					
NEW ENGLAND											
Maine.....	22	0	38	0	0	0	0	0	0	0	0
New Hampshire.....	0	0	4	0	0	0	0	0	0	0	0
Vermont.....	19	15	15	0	0	0	0	0	0	0	2
Massachusetts.....	151	101	158	0	0	0	0	0	0	0	1
Rhode Island.....	29	2	21	0	1	0	0	0	0	0	0
Connecticut.....	76	36	36	0	0	0	0	0	0	0	2
MIDDLE ATLANTIC											
New York.....	219	94	346	1	4	0	2	0	0	1	5
New Jersey.....	121	32	99	0	0	0	0	0	0	0	2
Pennsylvania.....	161	71	246	0	0	0	1	0	0	0	9
EAST NORTH CENTRAL											
Ohio.....	133	45	187	0	0	0	0	0	0	0	1
Indiana.....	9	13	41	0	0	0	0	0	0	0	1
Illinois.....	39	34	114	0	0	0	1	0	0	0	3
Michigan ¹	59	42	137	0	0	0	0	0	0	0	2
Wisconsin.....	53	65	91	0	0	0	0	0	0	0	4
WEST NORTH CENTRAL											
Minnesota.....	8	10	30	0	0	1	0	0	0	0	5
Iowa.....	3	20	17	0	0	0	0	0	0	0	9
Missouri.....	11	11	18	0	0	0	0	0	0	0	2
North Dakota.....	1	7	12	0	0	0	0	0	0	0	0
South Dakota.....	3	1	2	0	0	0	0	0	0	0	2
Nebraska.....	2	19	11	0	0	0	0	0	0	0	0
Kansas.....	28	28	63	0	0	1	0	0	0	0	20
SOUTH ATLANTIC											
Delaware.....	1	0	2	0	0	0	0	0	0	0	0
Maryland ¹	66	37	64	0	0	0	0	0	0	0	1
District of Columbia.....	8	3	18	0	0	0	0	0	0	0	0
Virginia.....	157	48	48	0	0	27	1	0	0	0	0
West Virginia.....	26	39	46	0	0	0	0	1	0	0	0
North Carolina.....	94	105	106	0	0	0	0	0	0	0	0
South Carolina.....	93	67	67	1	11	0	0	0	0	0	0
Georgia.....	21	12	20	0	2	0	0	0	5	3	11
Florida.....	24	25	17	1	0	0	0	0	0	4	0
EAST SOUTH CENTRAL											
Kentucky.....	34	28	42	0	0	0	0	0	0	0	0
Tennessee.....	20	29	48	1	0	0	0	0	0	0	0
Alabama.....	17	13	48	1	0	0	1	0	1	1	0
Mississippi ¹				0	0	0	0	0	2	2	1
WEST SOUTH CENTRAL											
Arkansas.....	8	11	12	0	0	0	0	0	2	0	3
Louisiana.....	3	1	9	1	0	0	0	0	0	2	0
Oklahoma.....	10	1	20	0	0	0	0	0	0	0	0
Texas.....	351	213	339	5	282	17	0	0	0	13	3
MOUNTAIN											
Montana.....	2	4	12	0	0	0	0	0	0	0	0
Idaho.....	3	2	12	0	0	0	0	0	0	0	0
Wyoming.....	2	12	3	0	0	0	0	1	0	0	0
Colorado.....	15	39	37	0	0	0	0	0	0	0	0
New Mexico.....	1	7	29	1	0	0	0	0	0	0	0
Arizona.....	33	26	26	0	2	10	0	0	0	0	0
Utah ¹	18	33	69	0	0	0	0	0	1	0	6
Nevada.....	0	13	4	0	0	0	0	0	0	0	0
PACIFIC											
Washington.....	9	51	51	0	0	0	0	0	0	0	0
Oregon.....	10	18	19	1	0	0	0	0	0	0	4
California.....	378	88	309	0	8	0	1	0	0	0	4
Total.....	2,551	1,576	3,645	13	310	56	7	2	11	26	103
Same week, 1944.....	1,576			22	277	62	11	1	11	41	38
Average, 1942-44.....	3,183			34	162	55	9	4	12	425	35
15 weeks: 1945.....	36,627			417	6,783	1,771	106	6	267	728	1,287
1944.....	27,196			394	3,087	958	150	5	150	569	610
Average, 1942-44.....	48,383		47,746	364	2,346	724	142	4	16	230	491

¹ Period ended earlier than Saturday.

² 5-year median, 1946-44.

Anthrax: Pennsylvania, 1 case. Leprosy: Texas, 1 case. Weil's disease: Idaho, 1 case.

WEEKLY REPORTS FROM CITIES

City reports for week ended April 7, 1945

This table lists the reports from 89 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcal, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland.....	0	0		0	3	0	6	0	5	0	0	7
New Hampshire:												
Concord.....	0	0		0	9	0	1	0	6	0	0	0
Vermont:												
Barre.....	0	0		0	0	0	0	0	1	0	0	1
Massachusetts:												
Boston.....	2	0		0	93	3	12	1	73	0	0	35
Fall River.....	0	0		0	2	0	2	0	4	0	0	1
Springfield.....	0	0		0	1	2	3	0	19	0	0	1
Worcester.....	0	0		0	4	0	8	0	24	0	0	3
Rhode Island:												
Providence.....	0	1		0	5	2	1	0	3	0	0	11
Connecticut:												
Bridgeport.....	0	0	1	1	0	0	3	0	5	0	0	0
Hartford.....	1	0		0	42	0	1	0	20	0	0	0
New Haven.....	0	0		0	1	0	2	0	6	0	0	4
MIDDLE ATLANTIC												
New York:												
Buffalo.....	0	0		0	1	0	5	0	14	0	0	0
New York.....	18	0	1	1	45	15	65	1	294	0	2	77
Rochester.....	0	0		0	5	0	3	0	12	0	1	7
Syracuse.....	0	0		0	0	1	2	0	2	0	0	15
New Jersey:												
Camden.....	1	0		0	0	0	2	0	1	0	0	0
Newark.....	0	0	1	0	6	1	1	0	27	0	0	3
Trenton.....	1	0		0	8	0	1	0	9	0	0	0
Pennsylvania:												
Philadelphia.....	4	0	3	2	130	3	29	1	91	0	0	59
Pittsburgh.....	1	0	1	1	1	4	5	0	27	0	0	2
Reading.....	0	0		0	1	0	1	0	9	0	0	0
EAST NORTH CENTRAL												
Ohio:												
Cincinnati.....	2	0		0	0	3	9	0	23	0	0	4
Cleveland.....	0	0	4	1	9	1	5	0	53	0	0	22
Columbus.....	0	0		0	1	0	1	0	2	0	0	5
Indiana:												
Fort Wayne.....	0	0		1	0	0	3	0	14	0	0	0
Indianapolis.....	1	0		0	4	2	11	0	17	0	0	4
South Bend.....	0	0		0	0	0	0	0	4	0	0	1
Terre Haute.....	0	0		0	1	0	1	0	2	0	0	0
Illinois:												
Chicago.....	0	1		0	81	12	25	2	112	0	0	16
Springfield.....	0	0		0	0	0	0	0	4	0	0	5
Michigan:												
Detroit.....	5	0	1	0	59	2	11	0	72	0	0	11
Flint.....	0	0		0	1	0	2	0	18	0	0	0
Grand Rapids.....	0	0		1	4	0	3	0	11	0	1	0
Wisconsin:												
Kenosha.....	0	0		0	2	0	0	0	3	0	0	3
Milwaukee.....	1	0	1	1	12	2	1	0	61	0	0	4
Racine.....	0	0		0	5	0	1	0	4	0	0	1
Superior.....	0	0		0	0	0	0	0	1	0	0	5
WEST NORTH CENTRAL												
Minnesota:												
Duluth.....	0	0		0	1	0	1	0	2	0	0	0
Minneapolis.....	0	0		0	2	2	5	0	24	0	0	2
St. Paul.....	0	0		0	7	0	1	0	2	0	0	1
Missouri:												
Kansas City.....	0	0		0	3	0	4	0	20	0	0	1
St. Joseph.....	0	0		0	3	0	0	0	4	0	0	0
St. Louis.....	0	1		1	3	2	11	0	17	0	0	4

City reports for week ended April 7, 1945—Continued

	Diphtheria cases	Enecephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Polio-myelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
North Dakota:												
Fargo.....	0	1	0	0	2	0	2	0	0	0	0	0
Nebraska:												
Omaha.....	0	0	0	0	15	1	4	0	13	0	0	0
Kansas:												
Wichita.....	0	0	0	0	1	0	1	0	5	0	0	1
SOUTH ATLANTIC												
Delaware:												
Wilmington.....	5	0	0	0	1	1	3	0	1	0	0	0
Maryland:												
Baltimore.....	8	0	0	0	12	2	11	0	110	0	0	51
Cumberland.....	0	0	1	0	0	0	1	0	7	0	0	3
Frederick.....	0	0	0	0	0	0	0	0	1	0	0	0
District of Columbia:												
Washington.....	1	0	0	0	7	2	11	0	30	0	0	11
Virginia:												
Lynchburg.....	0	0	0	0	0	0	0	0	0	0	0	0
Richmond.....	0	0	0	0	5	0	0	0	9	0	0	3
Roanoke.....	0	0	0	0	1	0	0	0	3	0	0	0
West Virginia:												
Charleston.....	0	0	0	0	0	0	0	0	0	0	0	0
Wheeling.....	0	1	0	0	31	0	1	0	3	0	0	1
North Carolina:												
Raleigh.....	0	0	0	0	17	0	1	0	0	0	0	20
Wilmington.....	0	0	0	0	2	0	0	0	0	0	0	6
Winston-Salem.....	1	0	0	0	0	0	1	0	9	0	0	2
South Carolina:												
Charleston.....	0	0	19	0	15	1	1	0	0	0	0	1
Georgia:												
Atlanta.....	0	0	0	0	0	0	2	0	9	0	0	3
Brunswick.....	0	0	0	0	4	0	1	0	0	0	0	9
Savannah.....	0	0	1	1	0	3	0	0	2	0	0	1
Florida:												
Tampa.....	0	0	0	0	0	0	3	0	2	0	0	4
EAST SOUTH CENTRAL												
Tennessee:												
Memphis.....	0	0	10	1	58	0	13	0	7	0	0	0
Nashville.....	0	0	0	0	2	0	1	0	2	0	1	0
Alabama:												
Birmingham.....	0	0	0	0	5	4	4	0	0	0	0	0
Mobile.....	0	0	0	0	0	0	4	0	0	0	0	0
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock.....	0	0	3	0	4	0	1	0	1	0	0	3
Louisiana:												
New Orleans.....	0	0	2	3	0	1	3	0	14	0	0	3
Shreveport.....	0	0	0	0	0	0	4	0	0	0	0	0
Texas:												
Dallas.....	1	0	0	0	12	1	2	0	7	0	0	2
Galveston.....	1	0	0	0	0	0	1	0	2	0	0	0
Houston.....	2	0	0	0	0	0	2	0	2	0	0	0
San Antonio.....	0	0	1	1	0	0	2	0	3	0	0	0
MOUNTAIN												
Montana:												
Billings.....	0	0	0	0	1	0	1	0	4	0	0	0
Great Falls.....	0	0	0	0	0	0	1	0	2	0	0	0
Helena.....	0	0	0	0	0	0	1	0	0	0	0	0
Missoula.....	0	0	0	0	1	0	0	0	3	0	0	0
Idaho:												
Boise.....	0	0	0	0	0	0	2	0	0	0	0	0
Colorado:												
Denver.....	4	0	2	0	2	0	5	0	13	0	0	7
Pueblo.....	0	0	0	0	1	0	0	0	5	0	0	0
Utah:												
Salt Lake City.....	0	0	0	0	100	0	1	1	6	0	0	11

City reports for week ended April 7, 1945—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomylitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle.....	0	0		0	29	1	4	0	26	0	0	0
Spokane.....	1	0		0	2	0	4	4	4	0	0	0
Tacoma.....	1	0		0	9	0	0	0	9	0	0	6
California:												
Los Angeles.....	4	0	3	1	57	1	4	0	47	0	0	35
Sacramento.....	0	0		0	14	1	2	0	8	0	0	12
San Francisco.....	1	0	1	1	69	0	9	0	41	0	0	12
Total.....	67	5	55	20	1,043	76	362	6	1,532	0	5	522
Corresponding week, 1944.....	53		87	37	6,944		431		2,493		7	267
Average, 1940-44.....	62		156	136	17,166		1,469		1,813		14	937

1 3-year average, 1942-44.
 1 5-year median, 1940-44.

Dysentery, amebic.—Cases: New York, 2; Houston, 1.

Dysentery, bacillary.—Cases: New York, 1; Chicago, 2; Baltimore, 4; Charleston, S. C., 7; Los Angeles, 2; San Francisco, 2.

Dysentery, unspecified.—Cases: Cincinnati, 1; San Antonio, 17.

Typhus fever, endemic.—Cases: Tampa, 1; Birmingham, 1; Little Rock, 1; Houston, 1.

Rates (annual basis) per 100,000 population, by geographic groups, for the 89 cities in the preceding table (estimated population, 1943, 34,331,900)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Poliomylitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England.....	7.8	2.6	2.6	2.6	418	18.3	101.9	2.6	434	0.0	0.0	165
Middle Atlantic.....	11.6	0.0	2.8	1.9	91	11.1	52.8	0.9	225	0.0	1.4	75
East North Central.....	5.5	0.6	3.6	2.4	109	13.4	44.4	1.2	244	0.0	0.6	49
West North Central.....	0.0	4.1	0.0	2.0	75	10.2	59.1	0.0	177	0.0	0.0	18
South Atlantic.....	24.5	1.6	32.7	4.9	155	14.7	58.8	0.0	304	0.0	0.0	188
East South Central.....	0.0	0.0	59.0	5.9	384	23.6	129.8	0.0	53	0.0	5.9	0
West South Central.....	11.5	0.0	17.2	11.5	46	5.7	43.0	0.0	83	0.0	0.0	23
Mountain.....	31.8	0.0	15.9	0.0	905	0.0	87.4	7.9	262	0.0	0.0	143
Pacific.....	11.1	0.0	6.3	3.2	285	4.7	36.4	0.0	214	0.0	0.0	103
Total.....	10.2	0.8	8.4	3.0	159	11.6	55.1	0.9	233	0.0	0.8	79

TERRITORIES AND POSSESSIONS

Panama Canal Zone

Notifiable diseases—February 1945.—During the month of February 1945, certain notifiable diseases were reported in the Panama Canal Zone and terminal cities as follows:

Disease	Panama		Colon		Canal Zone		Outside the Zone and terminal cities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chickenpox.....	10		2		5		2		19	
Diphtheria.....	6		3					2	9	2
Dysentery:										
Amebic.....	1				1		5		7	
Bacillary.....			2		1				3	
Malaria.....	4		2		51	1	42	1	100	2
Measles.....					7		1		8	
Mumps.....	1	1			1				2	1
Paratyphoid fever.....	1		1		2				4	
Pneumonia.....		12		4	30	1		1	30	18
Polomyelitis.....					3				3	
Relapsing fever.....							1		1	
Tuberculosis.....		9		3	2	1		6	2	19
Typhoid fever.....			1				3		4	
Whooping cough.....					1				1	

¹ Includes 27 recurrent cases.

² Reported in the Canal Zone only.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended March 24, 1945.—During the week ended March 24, 1945, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox.....		6	2	158	232	47	50	37	88	620
Diphtheria.....		3	3	48	4	13	9			80
Dysentery, unspecified.....					2				101	103
German measles.....		16		10	15		6	5	22	74
Influenza.....		30			64	2			43	139
Measles.....		3		190	87	2	34	38	342	696
Meningitis, meningococcus.....		1	2		1					4
Mumps.....		6	2	311	211	77	34	188	26	855
Polio-myelitis.....				1						1
Scarlet fever.....		8	7	77	91	15	12	39	34	283
Tuberculosis (all forms).....		5	11	121	38	10	1		49	235
Typhoid and paratyphoid fever.....				18	2		1	1		22
Undulant fever.....				2	2		1		4	9
Veneral diseases:										
Gonorrhoea.....		27	14	82	117	37	18	24	73	392
Syphilis.....		9	6	129	90	10	6	7	42	299
Whooping cough.....		18		154	75	1	7	12	16	283

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual incidence, only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A table showing the accumulated figures for these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

(Few reports are available from the invaded countries of Europe and other nations in war zones.)

Cholera

India—Calcutta.—For the week ended March 24, 1945, 115 cases of cholera were reported in Calcutta, India.

Smallpox

Great Britain—Scotland—Glasgow.—For the week ended March 17, 1945, 1 imported case of smallpox was reported in Glasgow, Scotland.

India—Calcutta.—For the week ended March 17, 1945, 376 cases of smallpox were reported in Calcutta, India.

Ivory Coast.—For the period March 11–20, 1945, 65 cases of smallpox were reported in Ivory Coast.

Sudan (French).—For the period March 11–20, 1945, 119 cases of smallpox were reported in French Sudan.

Typhus Fever

Bulgaria.—Typhus fever has been reported in Bulgaria as follows: Week ended March 17, 1945, 53 cases; week ended March 24, 1945, 66 cases.

Egypt.—For the week ended March 3, 1945, 646 cases of typhus fever with 54 deaths were reported in Egypt.

Malta.—For the week ended February 3, 1945, 6 cases of typhus fever (murine type) were reported in Malta.

Morocco (French).—For the period March 21–31, 1945, 385 cases of typhus fever were reported in French Morocco.

Trans-Jordan.—For the week ended February 17, 1945, 11 cases of typhus fever were reported in Trans-Jordan.

Yellow Fever

Brazil.—Deaths from yellow fever have been reported in Brazil as follows: Goiaz State—Anapolis, February 22–24, 2; Buriti Alegre, February 22, 1; Caldas Novas, February 1–18, 4; Catalao, February 24–26, 2; Corumbaiba, February 15–21, 2; Crimpas, February 13, 1; Cristalina, February 3, 1; Goiandira, February 2–4, 2; Leopoldo Bulhoes, February 6–18, 2; Luziania, February 5, 1; Orizona, February 11–14, 2; Pirenopolis, February 3, 1; Pires do Rio, February 1, 1; Souzaia, February 4, 1; Sussuapara, February 13, 1; Trindade, February 10, 1; Vianopolis, February 2–14, 3; Minas Geraes State—Campina Verde, February 13, 1; Paracatu, February 23, 2; Tupaciguara, February 2, 1.

* * *

DEATHS DURING WEEK ENDED APRIL 7, 1945

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

	Week ended April 7, 1945	Correspond- ing week, 1944
Data for 93 large cities of the United States:		
Total deaths.....	9, 121	9, 295
Average for 3 prior years.....	9, 257	
Total deaths, first 14 weeks of year.....	135, 364	141, 580
Deaths under 1 year of age.....	588	618
Average for 3 prior years.....	605	
Deaths under 1 year of age, first 14 weeks of year.....	8, 956	8, 823
Data from industrial insurance companies:		
Policies in force.....	67, 188, 314	68, 400, 833
Number of death claims.....	15, 492	12, 472
Death claims per 1,000 policies in force, annual rate.....	12.0	9.8
Death claims per 1,000 policies, first 14 weeks of year, annual rate.....	11.0	11.2

×