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THE USE OF CURTAIN WALLS IN RATPROOFING

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Curtain walls may be defined as exterior walls that serve to enclose rather than support. This definition when used in ratproofing applies directly to walls placed in the ground along the periphery of buildings to prevent rats from burrowing into the structure. Curtain walls may be employed to protect buildings from the ingress of rats in the absence of foundation walls, in cases of foundation walls of insufficient depth, and in structures built on pillars not high enough to prevent rats from gaining entrance. Also, such walls may be used to eliminate rat harborage. In the rat stoppage or ratproofing of old buildings, there are instances where curtain walls are a prerequisite to the successful eradication of rodents from within the building. Construction may be of metal or of concrete or masonry, although concrete appears to be most satisfactory because of permanency, ease of construction, and use of nonessential material.

There has been a paucity of experimental and practical evidence upon which to base specifications for an effective rat barrier in the form of a curtain wall. Since the economic factor in rat stoppage is also of importance, the depth to which a wall must extend is significant. Thus there arises the question as to what constitutes an effective economical curtain wall for routine rat stoppage procedure.

Although the value of repairing foundation walls has been known for some time, scant attention has been devoted to the depth and type necessary to restrain rats. During the plague outbreak at San Francisco in 1907-08 (1), basement walls were repaired. An ordinance was passed that required buildings to be constructed in such a manner as to prevent harborage of rats underneath or within the walls. In 1912 experimental tests (2) were made by the United States Public Health Service in San Juan, P. R., to ascertain the depth to which rodents would burrow. Rats were allowed free movement within

an enclosure for 2 months, food and water being supplied. Careful excavation showed the maximum depth of burrows to be approximately 22 inches. It is possible that hungry rats under natural conditions might have burrowed deeper. During the later plague outbreaks (1920-24), several ratproofing ordinances were enacted. Pensacola (3) required foundation walls to extend 18 inches below ground surface; Los Angeles (4) likewise had the same requirement with the exception, however, of that part of the wall sealed to concrete sidewalks facing streets. This is not always satisfactory since many instances have occurred where rats have entered buildings by burrowing beneath the street and sidewalks necessitating excavation through concrete walks to place curtain walls. An English reference (5) states that for the protection of stacks in rural areas galvanized iron sheets may be sunk into the ground to a depth of 2½ feet. Holsendorf (6), in 1937, stated that walls of approved ratproof material should extend at least 3 feet below ground surface. Boston (7), in applying "vent stoppage" to typhus control, employed curtain walls of masonry or metal extending 24 inches into the ground. Tucker, Woodring, and Essick (8), during an outbreak of typhus fever in Nashville, likewise used the 2-foot depth. Silver and Garlough (9) recommend that retaining walls extend 2 feet underground to prevent rats from burrowing under the floor from the outside. Silver, Crouch, and Betts (10) state that rats seldom burrow deeper than 2 feet unless natural passageway exists and include an illustration depicting a curtain wall with a footing; no dimensions are given.

There is little agreement as to what is an effective wall although there has been a tendency toward increasing the depth.

Among the various projects with which the Typhus Control Unit of the United States Public Health Service has cooperated, the typhus control program at Charleston, S. C., has offered the best opportunity to study curtain walls and their effectiveness as rat deterrents. Charleston has proved to be a true testing ground because of the large number of buildings requiring curtain walls. To date, over 4,000 feet of concrete curtain walls have been constructed. A summary of the curtain walls installed is presented in table 1.

TABLE 1.—*Summary of results*

Number of establishments	Curtain walls		Number of walls under which rats burrowed ¹	Number of walls repaired by L-construction	Number of food-handling establishments
	Type	Length			
2.....	24 inches.....	89 feet.....	2	2	2
27.....	36 inches.....	1,358 feet.....	12	9	20
1.....	48 inches.....	71 feet.....	1	1	1
15.....	24x12-inches L.....	759 feet.....	0	-----	10
51.....	18x12-inches L.....	1,793 feet.....	1	-----	3
1.....	12x12-inches L.....	44 feet.....	0	-----	1

¹ All places entered by rats burrowing under walls were food-handling establishments.

The first walls placed in Charleston consisted of two 24-inch straight walls totaling 89 feet. These walls were constructed by excavating a trench and pouring a concrete slab approximately 4 inches thick to the desired depth and sealing the wall at the top to the structure being ratproofed. Rats penetrated both establishments by burrowing under the walls. One wall was then extended to 36 inches while in the interim twenty-six 36-inch walls totaling over 1,300 feet were installed. The extended wall was underpassed by rats, as were eleven of the other 36-inch walls. The original wall was again extended, this time to 48 inches. Rats burrowed under this 48-inch curtain wall. In an attempt to block out the rats, Sanitary Inspector J. H. Harris, of the United States Public Health Service, placed a 12-inch horizontal flange at the base of this wall with complete success. The flange was further applied to 10 cases where the straight walls already placed were underpassed. The flanges stopped the rats from undermining in all instances.

A concrete L-shaped wall was developed consisting of a vertical portion approximately 4 inches thick having a horizontal flange at the bottom 2 inches thick extending 8 inches out from the vertical or 12 inches over-all horizontal measurement. The depth was varied to ascertain the minimum or most economical depth for an effective wall. Such walls are customarily constructed by excavating a trench 1 foot wide down to the required depth. A 2-inch layer of concrete is placed on the bottom of the trench and then the vertical portion is poured approximately 4 inches thick to any desired height and tied in with the building. An economical form has been devised utilizing waste cardboard, usually from old cartons, spaced by 2×4-inch lumber. If the earth is firm, it may be used as one side of the form. As the concrete is poured, earth is shoveled back, keeping the form straight. The lumber is removed, as the pouring of concrete progresses, to be reused while the cardboard is left in the ground.

Fifteen establishments have been protected by 759 feet of 24-inch L-shaped curtain walls with no infiltration underneath by rats. In 31 places, 1,793 feet of 18-inch L wall were used; rats burrowed under in one instance. One establishment was tried with 44 feet of 12-inch L with no penetration.

All establishments entered by rats burrowing under curtain walls were food places. The number of food establishments treated with each type of wall is given in table 1. Rats penetrated 60 percent of the food units protected by the 36-inch straight wall, or 12 out of 20 instances. Although the 18-inch L wall proved effective with 28 nonfood buildings, one out of three food units was entered. The 24-inch L wall protected all units including 10 food establishments.

DISCUSSION

The rat-stoppage work at Charleston clearly demonstrates the ineffectiveness of straight curtain walls placed to a depth of 48 inches. Experiences on other projects have also indicated that rats occasionally may overcome the 48-inch barrier.

The 24-inch L-shaped curtain walls presented a different picture. Complete protection was provided without excessive cost, although many burrows were traced down to the shelf and in many cases along the entire flange. One 18-inch L wall out of thirty-one was evaded although a 12-inch L wall ratproofing a grocery store appeared satisfactory.

The type of establishment and resultant infestation naturally play an important part in ratproofing. A food establishment heavily infested offers a difficult problem. Likewise in a rat-infested area the rodents' effort to regain their source of food presents a biological pressure against ratproofing measures. Charleston provided a severe test for ratproofing. Of 77 establishments with curtain walls, 38 were food units. All establishments burrowed into by rats were food-handling places. It would appear that rats, having their normal byways blocked and being attracted by the food, make an extra effort to enter these buildings.

In a great many instances rats have been stopped within buildings and burrow under the wall to effect an exit. Once a burrow is made, it serves as a mode of egress and ingress. In two cases with 36-inch straight walls, such burrows were observed and closed by tamping the earth. No rats have reentered the building. The one 18-inch L wall which was burrowed was believed to have been caused by a rat trying to escape from the building. It is believed that it is practically impossible to keep a rat from getting out of a building if it so desires. By promptly eradicating all rats locked within a building, ratproofing will prove more effective. Also, once a rat burrows out, it will make a strong effort to return especially if its food supply has been restricted.

The L-shaped walls find application in new construction and in the repair of old buildings. Where concrete floors are present, the value of curtain walls is questionable. However, in the absence of rat-proof floors, rat penetration should be anticipated and the 24-inch L wall should prove more effective and economical than straight walls. While ratproofing old buildings, many foundations are encountered extending 18 to 24 inches below ground surface that may be protected by merely installing a flange at the base.

CONCLUSIONS AND SUMMARY

Curtain walls are used in ratproofing to enclose areas to prevent the ingress of rats. Actual results have been discussed in order to

illustrate the value of various types of walls and to present an effective modification for routine procedure.

The typhus control program at Charleston, S. C., offered an excellent opportunity to study curtain walls since 77 establishments have been protected by over 4,000 feet of such walls. The effectiveness was judged by the rapidity of rat eradication from within the building and by the absence of rat burrows under the walls.

Rats burrowed under 24-inch, 36-inch, and 48-inch straight walls protecting food establishments. A concrete L-shaped wall was developed consisting of a vertical portion 4 inches thick and a horizontal flange at the bottom 2 inches thick extending 8 inches out from the vertical or 12 inches over-all horizontal measurement. Fifteen 24-inch L walls, thirty-one 18-inch L walls, and one 12-inch L wall have been placed. Rats burrowed under one 18-inch L wall.

For routine rat-stoppage procedure, it is suggested that the 24-inch L-shaped curtain wall be utilized.

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SICKNESS ABSENTEEISM AMONG INDUSTRIAL WORKERS, SECOND QUARTER OF 1943, WITH A NOTE ON THE OC- CURRENCE OF THE RESPIRATORY DISEASES, 1934-43¹

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The accompanying data are derived from analyses of periodic reports on sickness and nonindustrial injuries causing disability lasting more than 1 week among over 250,000 male members of industrial sick benefit associations, group insurance plans, and company relief departments.

¹ From the Division of Industrial Hygiene, National Institute of Health. The first quarter appeared in *Pub. Health Rep.*, 58: 1273-1277 (Aug. 20, 1943).

SECOND QUARTER OF 1943

The rate of 114.6 for sickness shows an increase of 31 percent when compared with the corresponding rate (87.4) for 1942, the chief contributing factor to the increase being the group of respiratory diseases with its increase of 68 percent from a rate of 33.4 in 1942 to a rate of 56.0 in 1943. It will be observed that each member of the respiratory group of diseases shows an increase, notable increases being shown by pneumonia, 88 percent; influenza and grippe, 77 percent; and bronchitis, 75 percent.

TABLE 1.—Average annual number of absences on account of sickness and nonindustrial injuries disabling for 8 consecutive calendar days or longer among MALE employees in various industries, by cause, the second quarter of 1943 compared with the second quarter of 1942, and the first half of 1943 compared with the first halves of the years 1938-42, inclusive ¹

Cause (numbers in parentheses are disease title numbers from the International List of Causes of Death, 1939)	Annual number of absences per 1,000 males				
	Second quarter		First half		
	1943	1942	1943	1942	1938-42
Sickness and nonindustrial injuries ²	125.6	98.1	145.1	110.5	107.3
Nonindustrial injuries (169-195).....	11.0	10.7	11.9	11.4	10.9
Sickness.....	114.6	87.4	133.2	99.1	96.4
Respiratory diseases.....	56.0	33.4	76.6	45.3	46.8
Tuberculosis of the respiratory system (13).....	1.0	.8	.7	.7	.8
Influenza, grippe (33).....	20.3	11.5	30.6	17.8	22.6
Bronchitis, acute and chronic (106).....	9.1	5.2	12.8	7.2	6.1
Pneumonia, all forms (107-109).....	9.2	4.9	12.6	6.1	4.7
Diseases of the pharynx and tonsils (115b, 115c).....	6.6	5.5	8.3	5.7	5.9
Other respiratory diseases (104, 105, 110-114).....	9.8	5.5	11.6	7.8	6.7
Digestive diseases.....	16.3	16.1	15.5	16.1	14.8
Diseases of the stomach except cancer (117, 118).....	5.6	4.5	5.1	4.4	4.0
Diarrhea and enteritis (120).....	1.7	1.5	1.6	1.5	1.2
Appendicitis (121).....	4.3	5.3	4.1	5.3	5.0
Hernia (122a).....	1.9	2.0	2.0	1.9	1.7
Other digestive diseases (115a, 115d, 116, 122b-129).....	2.8	2.8	2.7	3.0	2.9
Nonrespiratory-nondigestive diseases.....	38.1	35.8	37.2	35.6	32.5
Infectious and parasitic diseases (1-12, 14-24, 26-29, 31, 32, 34-44) ³	3.5	3.2	3.1	3.2	2.7
Rheumatism, acute and chronic (58, 59).....	4.8	4.2	4.6	4.1	4.3
Neurasthenia and the like (part of 84d).....	1.4	1.0	1.3	1.0	1.0
Neuralgia, neuritis, sciatica (87b).....	2.6	2.3	2.8	2.3	2.3
Other diseases of the nervous system (80-85, 87, except part of 84d, and 87b).....	1.4	1.1	1.4	1.2	1.2
Diseases of the heart and arteries, and nephritis (90-99, 102, 130-132).....	5.3	4.4	5.3	4.7	4.6
Other diseases of the genitourinary system (133-138).....	2.7	2.7	2.6	2.5	2.4
Diseases of the skin (151-153).....	3.1	2.8	2.9	2.6	2.6
Diseases of the organs of movement except diseases of the joints (156b).....	3.6	2.9	3.6	3.2	3.0
All other diseases (45-57, 60-79, 88, 89, 100, 101, 103, 154, 155, 156a, 157, 162).....	9.7	11.2	9.6	10.8	8.4
Ill-defined and unknown causes (200).....	4.2	2.1	3.9	2.1	2.3
Average number of males covered in the record.....	272, 519	259, 166	269, 797	255, 528	1, 014, 495
Number of organizations.....	21	21	21	21	-----

¹ The same 21 organizations are included in 1943 and 1942.

² Industrial injuries, venereal diseases, and a few numerically unimportant causes of disability are not reported.

³ Except influenza and grippe, respiratory tuberculosis, and the venereal diseases.

The digestive diseases show a slight increase while appendicitis reveals a decrease from 5.3 to 4.3.

The nonrespiratory-nondigestive diseases present an increase of 12 percent, neurasthenia increasing 40 percent and diseases of the heart and arteries, and nephritis over 20 percent.

SECOND QUARTERS OF 1934-43

Figure 1 presents graphically in the upper half of the figure the variation over the 10-year period, 1934-43, of the contribution of each broad cause group to the varying total sickness rate, the lower half showing the contribution made by influenza and grippe, bronchitis, and pneumonia, respectively, to the varying total respiratory disease rate.

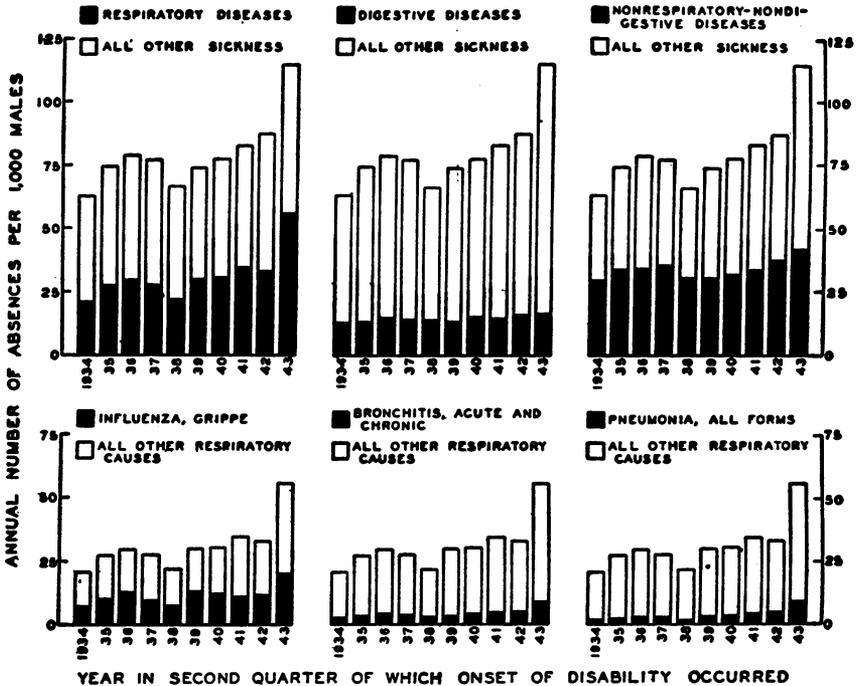


FIGURE 1.—Average annual number of absences per 1,000 males on account of sickness disabling for 8 consecutive calendar days or longer, by broad cause group and selected respiratory cause, according to year in the second quarter of which onset of disability occurred; experience of male employees in various industries, 1934-43, inclusive. (Each bar for a particular year in the upper half of the figure represents the average annual frequency from all sickness and the contribution made to that frequency by a particular cause group; each bar for a particular year in the lower half represents the average annual frequency from all respiratory diseases and the contribution made to that frequency by a selected respiratory cause.)

Broad cause groups.—An examination of the upper half of the figure reveals that the sickness rate of 114.6 per 1,000 males has never been equalled or exceeded during the 10-year period, the rate being 44 percent in excess of the mean (79.6) for the 10 second quarters. The increases from 1938 to 1942 have been relatively gradual ones while the increase from 1942 to 1943 appears to be abrupt. The respiratory group of diseases generally reflects the changes in the total sickness rate.

The rates for the group of digestive diseases show no spectacular changes. While the rate of 16.3 for 1943 exceeds only slightly the

rate for 1942, it is the highest rate shown by the 10-year period and exceeds the 10-year mean (14.3) by 14 percent.

The group of nonrespiratory-nondigestive diseases shows an upward trend in the period 1934-37 and another in 1938-43. The rate for 1943 (42.3) is the highest for the 10-year period and exceeds the mean (34.0) by 24 percent.

Influenza and grippe, bronchitis, and pneumonia.—The lower half of figure 1 shows a number of noteworthy relationships. Each of the three graphs shows over the 10-year period the variation of the second-quarter rate for the respiratory group of diseases, and the contribution made to this rate by influenza and grippe, bronchitis, and pneumonia, respectively, is indicated.

It will be observed that the influenza and grippe rate (20.3) for 1943 is the highest for the 10-year period, being 78 percent in excess of the 10-year mean of 11.4. The variation of the rate follows rather closely the rate for the respiratory group of diseases. Similarly with regard to bronchitis and pneumonia each presents the highest rate in 1943; when these rates are compared with their 10-year means, excesses of 102 and 149 percent, respectively, are found.

THE BENEFITS ACCRUING FROM THE RATPROOF CONSTRUCTION OF VESSELS

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For over a decade the United States Public Health Service has been interested in securing the elimination of potential rat harborage on new American ships during construction. This interest arose from a desire to protect American ports against the introduction of rat-borne diseases and to secure for American shipping interests the benefits accruing from the operation of rat-free vessels.

A review of the sanitary reports concerning ships found to harbor plague-infected rats indicates that in each instance the ship afforded a considerable amount of structural harborage which had been colonized by rats. When it is considered that the danger of introducing plague and other rat-borne disease into a port through the medium of merchant ships is in direct proportion to the number of rat-infested ships entering the port and the extent of such infestation, the value of preventive measures such as ratproofing will be apparent. It is also evident that the danger of conveying plague from infected to non-infected ports is greater when a plague-infected rat gains access to a vessel harboring a large colony of rats than would be the case if the same rat entered a rat-free ship affording no harborage.

In order that the scope of this paper may be clearly understood, the following definition is given: Ratproofing, as it relates to ship

construction, is the application of procedures designed to eliminate or render inaccessible to rats those spaces capable of affording protected harborage where rats may successfully obtain shelter, or may nest, breed, or obtain food. These spaces may occur as the result of structural design, the installation of fixtures and furnishings, or careless workmanship.

BENEFITS DERIVED BY SHIPPING INTERESTS

The benefits which shipping interests derive from operating rat-proof ships may be summed up as follows:

- (1) Reduction of the expense and delay resulting from fumigation necessitated by rat infestation.
- (2) Protection of the vessel's passengers and crew against the hazards of rat-borne diseases.
- (3) Elimination of damage to cargo and ship structure from gnawing of rats.
- (4) Reduction of fire hazards.

All of these benefits are not subject to appraisal. However, the frequency of fumigations, together with the degree and frequency of rat infestation on shipboard, is a matter of record.

DISCUSSION

The monetary result of ratproofing ships during construction is shown by the fact that at the port of New York not a single vessel constructed and structurally maintained in accordance with the ratproofing specifications¹ of the United States Public Health Service has ever been fumigated for the destruction of rats. Aside from delay, it is estimated that the cost of fumigating an average-sized freight ship ranges between \$600 and \$1,000 for each fumigation.

The application by the United States Public Health Service of such sanitary measures as ratproofing, sanitary inspection, trapping, protection of food supplies, and allied procedures in cooperation with the shipping interests has resulted in a reduction in the number of ships fumigated at the port of New York from 1,179 in the fiscal year 1925 to 157 during the year 1943.

Using the conservative estimate of \$600 for each ship fumigated, these measures have reduced the total annual cost of fumigation to the shipping interests from \$707,400 in the year 1925 to \$94,200 in 1943.

During the fiscal year ended June 30, 1943, 3,767 vessels underwent sanitary inspection at New York. Of these, 3,004 had not been ratproofed while 763 vessels had been ratproofed according to Public Health Service standards. Of the non-ratproof vessels, 983 were

¹ Ratproofing of New Ships. Supplement No. 151 to the Public Health Reports.

found to be rat infested and 157 were subjected to fumigation. On the other hand, only 15 of the 763 ratproof vessels were rat infested and none was fumigated. The value of ship ratproofing is clearly evidenced by these figures.

The value of ratproofing measures is not fully indicated in the statistics presented for the reason that a considerable number of rat-infested foreign vessels which are non-ratproof and have not recently called at plague-infected or suspected ports are permitted to return to their home ports for fumigation. Again many rat-infested foreign vessels are fumigated immediately prior to sailing for the port of New York. The total fumigations of non-ratproof ships would show an approximate threefold increase if these fumigations were considered.

It will be noted that of all the ships found to be rat infested, only one in six was fumigated. This is accounted for by the fact that only those ships found to be rat infested to the extent of presenting a definite health hazard are fumigated. The control of rats on ships not coming within this category is accomplished by intensive trapping,² elimination of waste foods, and general sanitary measures. The few rats which occasionally come aboard ratproofed ships are easily eliminated by means of traps or by direct violence, there being no place for them to hide after discharge of cargo.

While an endeavor has been made to illustrate the value of eliminating potential rat harborage on ships during the course of construction, it is desired to emphasize the importance of all phases of sanitary construction. Ratproofing is complementary to and a part of general sanitation. Any procedure which tends to control rat infestation will also raise the sanitary standard and vice versa. This fact is recognized by the Public Health Service and considerable attention has been devoted to the promotion of construction features which will facilitate the maintenance of cleanliness while the ship is in operation.

SUMMARY

The value of eliminating potential rat harborage on ships during the course of construction is discussed. A comparison is made between ratproofed and non-ratproofed vessels as to rat infestation and fumigation. Only 1.7 percent of the 763 ratproofed ships entering the port of New York during the fiscal year 1943 was rat infested and in no instance was the infestation sufficient to require fumigation.

² Trapping Rats on Ships. Reprint No. 2170 from the Public Health Reports.

PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

November 7–December 4, 1943

The accompanying table summarizes the prevalence of nine important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State are published in the Public Health Reports under the section "Prevalence of disease." The table gives the number of cases of these diseases for the 4 weeks ended December 4, 1943, the number reported for the corresponding period in 1942, and the median number for the years 1938–42.

DISEASES ABOVE MEDIAN PREVALENCE

Influenza.—Whether the cases be called influenza, grippe, catarrhal fever, or just common cold, there is little doubt that an epidemic of acute upper respiratory affections of a mild form is sweeping the country. With local estimates of prevalence of as high as 10 percent of the population sick from these affections, and with estimated cases running into the millions, it may seem useless to quote the much smaller numbers of incompletely reported cases. A single case of a mild grippe may not be diagnosed as influenza, but if the attending physician knows that many similar cases exist in the community at that particular time, the case is more likely to be called influenza. In other words, the diagnostic term used may be based on epidemiological as well as clinical evidence. As a consequence, reporting of cases of "influenza" may begin after the prevalence of the epidemic is recognized rather than be the first intimation of the outbreak. In spite of these shortcomings, it may be worth while to look at the numbers of cases reported as influenza by attending physicians.

The number of reported cases of influenza rose from 5,581 during the 4 weeks ended November 6 to 10,238 during the 4 weeks ended December 4. Considered by weeks for a longer period this represents an increase from about 1,200 per week in the first half of October to about 1,400 cases per week in the next 3 weeks (ended November 6), and to 1,555, 1,734, 2,465, 4,484, and 23,746, respectively, in the 5 weeks ended December 11, 1943. However, 12,683, or about half of the cases for the week ended December 11, were reported by 4 States from which few or no cases had previously been reported. Some of these reports may have been estimates rather than actual reports.

The 10,238 cases for the current 4-week period may be compared with 7,147 for this period in 1942, which figure also represents the

median for 1938-42. Considered in weeks, the reported cases up to November 20, 1943, were running about the same as in 1942, about the same or somewhat below 1941, and somewhat above 1940. For the weeks ended November 27 and December 4 the reported cases were considerably above the same week for 1942 and 1941 but below 1940 when a minor epidemic began about this time of the year. In the week ended December 11 there were 23,746 cases as compared with 2,604, 2,742, and 9,663, in the corresponding weeks of 1942, 1941, and 1940, respectively.

The accompanying table shows by geographic area the reported cases of influenza by weeks for the fall of 1943 and corresponding weeks in preceding years. There was a report of 163 cases (half of them in Michigan) in the East North Central States for the week ended November 13, which represented about 5 times the preceding week and about 3 times the same week of 1942; the next 2 weeks dropped back to normal, but the week ended December 4 was up again. In the week ended November 27 (2 weeks after the first East North Central rise) the West North Central, East South Central, West South Central, and the New England States all rose considerably above preceding weeks and also above corresponding weeks of 1942. There is some indication that the West South Central started to rise a week earlier than the other two sections mentioned. The reported cases in the South Atlantic States started to rise in the same week (November 27) but were not above 1942 until the next week. Cases in the Mountain States rose for the first time in the week ended December 4 and the Middle Atlantic and Pacific States showed no rise up to December 4. For the week ended December 11, the reported cases show a definite rise over the preceding week and a definite excess over the same week of 1942 in every section except the Pacific coast. Other evidence supports the generalization that the epidemic started in the Great Lakes region about the second week of November and had reached nearly all sections by the end of the first week in December.

Of more importance than reported cases is the question of mortality. As already noted, the overwhelming proportion of the cases are mild with no serious complications. However, even the mildest outbreaks of respiratory disease are accompanied by some mortality, particularly among the very young and the very old. Figures from the United States Bureau of the Census on mortality from *all causes* in 90 major cities in the United States showed 8,977 and 8,677 deaths for the weeks ended November 20 and 27, respectively. For the next week, ended December 4, there were 9,845¹ deaths from all causes, or an excess of about 1,000 deaths over the average for the 2 preceding weeks. For the week ended December 11 the rise in deaths from all causes

¹ Figures quoted here include estimates for 1 to 3 cities not reporting for certain weeks.

over the preceding week was about 500 or one-half of the rise of 1,000 mentioned above. However, preliminary reports for the week ended December 18 show a rise of about 1,000 deaths over the number reported for the week ended December 11.

Influenza cases reported by geographic regions by weeks in 1943 and for the corresponding weeks in preceding years

Geographic area and years	Week ended—1										
	Oct. 2	Oct. 9	Oct. 16	Oct. 23	Oct. 30	Nov. 6	Nov. 13	Nov. 20	Nov. 27	Dec. 4	Dec. 11
46 States,² District of Columbia, and New York City:											
1943.....	905	1,246	1,288	1,447	1,417	1,429	1,555	1,734	2,465	4,484	23,746
1942.....	979	1,098	1,346	1,143	1,339	1,576	1,596	1,769	1,854	1,928	2,604
1941.....	830	974	995	1,131	1,330	1,553	2,308	2,372	2,469	2,478	2,742
1940.....	468	599	705	748	856	976	787	1,180	1,332	3,014	9,663
New England:											
1943.....	3	6	2	7	5	3	1	3	32	54	121
1942.....	1	3	6	3	11	5	16	4	7	9	3
1941.....	1	1	6	1	1	1	1	1	2	3	2
1940.....	3	2	1	1	1	1	6	1	4	5	4
Middle Atlantic:											
1943.....	7	9	11	11	10	14	7	24	11	36	133
1942.....	11	26	17	21	15	22	37	20	25	31	31
1941.....	5	3	16	10	8	9	6	16	11	19	15
1940.....	9	10	8	5	4	14	6	11	4	6	9
East North Central:											
1943.....	17	43	32	12	29	32	163	36	41	122	930
1942.....	62	49	69	34	48	63	50	68	64	50	69
1941.....	46	60	39	42	61	45	60	105	65	75	79
1940.....	51	44	53	60	54	57	43	67	56	81	133
West North Central:											
1943.....	19	7	9	7	9	6	8	17	432	431	7,398
1942.....	16	24	18	14	10	8	24	15	8	30	47
1941.....	3	17	11	17	13	13	21	36	15	23	35
1940.....	4	24	8	9	14	8	10	7	17	19	30
South Atlantic:											
1943.....	251	301	289	493	402	428	446	507	649	1,227	4,035
1942.....	315	324	481	450	404	539	637	674	811	559	1,042
1941.....	264	326	353	317	422	407	434	534	529	624	727
1940.....	215	195	231	208	280	425	259	500	325	453	632
East South Central:											
1943.....	45	31	49	62	33	96	70	86	111	428	6,007
1942.....	40	31	72	51	106	64	52	88	45	90	123
1941.....	11	5	18	21	29	49	60	97	100	142	101
1940.....	9	24	21	50	43	22	59	92	76	69	67
West South Central:											
1943.....	477	714	787	768	773	669	705	815	971	1,546	3,633
1942.....	423	524	551	452	590	657	626	681	631	907	1,017
1941.....	356	444	416	580	627	859	1,482	1,350	1,547	1,306	1,474
1940.....	98	172	247	279	274	327	272	285	210	416	773
Mountain:											
1943.....	72	106	94	63	97	142	137	224	179	579	1,393
1942.....	68	96	89	79	109	171	102	156	200	201	206
1941.....	103	73	101	81	103	110	123	143	146	193	198
1940.....	45	99	105	108	151	92	108	67	150	390	780
Pacific:											
1943.....	14	29	35	24	59	39	18	22	39	61	96
1942.....	23	21	43	39	46	47	52	63	63	51	71
1941.....	42	45	35	63	67	61	121	91	54	93	111
1940.....	34	29	31	28	35	30	24	150	490	1,575	7,235

¹ First week of year is the one ended Jan. 4 to 10 inclusive, with corresponding weeks counted from this base.

² New York State and Mississippi excluded.

It must be remembered that the deaths mentioned above are from all causes. Also that these 90 cities of 100,000 or more population have an aggregate of some 38,000,000 inhabitants and the numbers of increased deaths quoted above do not mean a large change in the death rate.

Meningococcus meningitis.—Eleven of the States reported more than two-thirds of the total of 967 cases of meningitis for this 4-week period. These 11 States in the order of numbers of cases reported were: New York 121, Pennsylvania 93, California 80, Michigan 69, Massachusetts 46, Ohio 44, Illinois 41, Virginia 35, Maryland 32, Missouri 32, Tennessee 26. These States represent practically all of the geographic regions. There was an increase over the 1938-42 median in every region. For the country as a whole the number of cases was more than 3 times the number reported for the corresponding period in 1942 and more than 7 times the median. In the Pacific region the number of cases (104) was almost 15 times the median, in the East North Central region the number (188) was more than 12 times the median, and in other regions the cases ranged from 2 times the median in the Mountain region to approximately 9 times the median in the North Atlantic and West North Central regions.

An increase in the number of cases of this disease is normally expected at this season of the year and the rate of increase over the preceding 4-week period was about normal. However, meningitis has maintained an unusually high level since December of 1942 and, as has been the case throughout the year, the current incidence is the highest on record for this period. Further increases may be expected as the rise that normally occurs at this time of the year does not reach its peak until March or April.

Poliomyelitis.—The number of cases of poliomyelitis dropped from 1,544 during the preceding 4-week period to 755 during the 4 weeks ended December 4. Compared with preceding years the number of cases was more than twice the number reported during this period in 1942 and 1.3 times the 1938-42 median. In the South Atlantic and East South Central regions the incidence was below normal, but all other regions reported significant excesses over the normal seasonal incidence.

Scarlet fever.—The number of cases of this disease (11,822) was also relatively high during the current 4-week period, being about 10 percent above the 1938-42 median. The greatest increase over the seasonal expectancy was reported from the Pacific Coast, with minor increases in the Mountain, North Atlantic, and West South Central regions. In other regions the numbers of cases either closely approximated the 1938-42 medians or fell considerably below them.

Measles.—The number of reported cases of measles rose from approximately 9,800 during the 4 weeks ended November 6 to 18,239 during the current 4-week period. The incidence was about 8,000 cases above the 5-year median. All sections of the country except the New England, Mountain, and Pacific regions contributed to the relatively high incidence of this disease. However, measles was most prevalent in the two North Central regions; in the East North

Central States the number of cases (6,211) was more than 6 times the 1938-42 median, while in the West North Central region the incidence (3,308 cases) was about 5 times the median. In the Pacific region the incidence was considerably below the seasonal expectancy.

Number of reported cases of 9 communicable diseases in the United States during the 4-week period Nov. 7-Dec. 4, 1943, the number for the corresponding period in 1942, and the median number of cases reported for the corresponding period, 1938-42

Division	Current period	1942	5-year median	Current period	1942	5-year median	Current period	1942	5-year median
	Diphtheria			Influenza ¹			Measles ²		
United States.....	1,533	1,854	2,430	10,238	7,147	7,147	18,239	10,851	10,095
New England.....	44	17	27	90	36	16	1,457	2,360	1,481
Middle Atlantic.....	89	144	153	78	113	74	3,136	2,743	1,787
East North Central.....	175	242	314	362	232	261	6,211	880	972
West North Central.....	164	164	152	888	77	77	3,308	570	620
South Atlantic.....	334	591	779	2,829	2,681	2,121	2,055	180	641
East South Central.....	201	198	338	695	275	399	411	153	198
West South Central.....	274	297	447	4,037	2,845	1,535	327	98	173
Mountain.....	70	79	79	1,119	659	659	738	1,540	784
Pacific.....	182	122	122	140	229	229	596	2,327	1,729
	Meningococcus meningitis			Poliomyelitis			Scarlet fever		
United States.....	967	314	135	755	357	576	11,822	10,463	10,463
New England.....	95	49	11	50	7	7	963	1,186	654
Middle Atlantic.....	250	91	29	65	42	48	2,078	1,651	1,814
East North Central.....	188	33	15	120	54	72	2,970	2,864	3,002
West North Central.....	61	8	7	60	49	49	1,275	1,097	1,223
South Atlantic.....	152	53	26	9	20	43	1,446	1,439	1,439
East South Central.....	64	20	19	20	21	35	563	785	849
West South Central.....	34	18	9	76	62	27	526	362	413
Mountain.....	19	11	8	63	20	20	642	330	405
Pacific.....	104	31	7	292	82	36	1,359	749	749
	Smallpox			Typhoid and paratyphoid fever			Whooping cough ²		
United States.....	46	49	128	312	341	591	9,973	13,359	14,261
New England.....	0	0	0	16	10	14	778	1,876	1,342
Middle Atlantic.....	0	0	0	64	50	103	2,112	4,161	4,161
East North Central.....	29	21	45	32	37	66	2,466	3,279	3,279
West North Central.....	7	10	26	14	30	32	665	523	523
South Atlantic.....	1	1	1	32	75	113	1,695	1,186	1,420
East South Central.....	1	4	4	31	45	76	527	371	531
West South Central.....	6	6	19	76	48	107	526	688	424
Mountain.....	1	4	4	34	29	32	467	257	442
Pacific.....	1	3	8	13	17	36	737	1,018	1,018

¹ Mississippi and New York State excluded; New York City included.

² Mississippi excluded.

DISEASES BELOW MEDIAN PREVALENCE

Diphtheria.—For the 4 weeks ended December 4 there were 1,533 cases of diphtheria reported as compared with 1,854 for the corresponding period in 1942 and a 1938-42 median of 2,430 cases. The New England, West North Central, and Pacific regions reported excesses over the median; in the Mountain region the incidence was

about normal; and in the other 5 regions the numbers of cases were considerably below the normal seasonal expectancy.

Smallpox.—While the number of cases (46) of smallpox was only slightly below that for the corresponding period in 1942, it was less than 40 percent of the 1938–42 median. The situation was favorable in all sections of the country.

Typhoid and paratyphoid fever.—This disease remained at a relatively low level, the number of cases (312) reported being the lowest on record for this period. In the New England and Mountain regions the incidence was about normal, but in all other sections the disease was considerably less prevalent than in preceding years.

Whooping cough.—The incidence of whooping cough was also below normal for this season, 9,973 cases being reported for the current period as compared with a 1938–42 median of approximately 14,300 cases. Of the 9 geographic regions, 4 reported increases over the median, and in 5 sections the incidence was below normal. In the Middle Atlantic region the number of cases was only about half of the median figure, and in the West North Central region the current incidence was about 75 percent of the median.

MORTALITY, ALL CAUSES

For the 4 weeks ended December 4 there were approximately 36,100 deaths from all causes in the group of large cities reporting to the Bureau of the Census, an increase of 1,600 cases over the preceding 4-week period. While the death rate from all causes in these cities has been relatively high for the past year, there was a sharp upturn during the last week of the current period (week ended December 4), part of which is probably attributable to the sudden rise in the respiratory affections that occurred during the last week of the period and which was discussed above with influenza.

DEATHS DURING WEEK ENDED DECEMBER 11, 1943

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

	Week ended Dec. 11, 1943	Correspond- ing week, 1942
Data for 90 large cities of the United States:		
Total deaths.....	10,373	9,401
Average for 3 prior years.....	8,868	
Total deaths, first 49 weeks of year.....	445,120	415,304
Deaths under 1 year of age.....	655	723
Average for 3 prior years.....	625	
Deaths under 1 year of age, first 49 weeks of year.....	31,790	28,773
Data from industrial insurance companies:		
Policies in force.....	66,093,577	65,287,268
Number of death claims.....	12,621	12,427
Death claims per 1,000 policies in force, annual rate.....	10.0	9.9
Death claims per 1,000 policies, first 49 weeks of year, annual rate.....	9.6	9.1

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 DECEMBER 18, 1943

Summary

Influenza epidemic.—The number of reported cases of influenza increased sharply during the week from 23,746 to 82,951. The 5-year (1938–42) median for the week is 2,995. The recent increases are comparable to those of approximately the corresponding period in 1940, when a mild influenza epidemic moved eastward from the Pacific coast along the southern States. However, the initial sharp increase in reported cases occurred a week or two earlier this year. Although the type of disease so far appears to be mild, there has apparently been a concomitant increase in urban mortality. Following are the weekly figures of reported cases during the 2 years, together with figures showing the deaths from influenza and pneumonia combined for 39 scattered cities, and the total mortality, all causes, for 90 large cities (ending dates for the weeks are as of 1943):

	Nov. 27	Dec. 4	Dec. 11	Dec. 18
Cases reported by State health officers:				
1943.....	2,465	4,489	23,746	82,951
1940.....	1,332	3,014	9,663	29,864
Deaths, influenza and pneumonia combined (39 cities):				
1943.....	254	381	459	832
3-year (1940–42) average.....	281	289	297	828
Total deaths, all causes (number of cities in parentheses):				
1943.....	8,450 (87)	9,565 (87)	10,373 (90)	11,379 (88)
1940 (88).....	8,070	8,341	8,565	8,648

The weekly figures for influenza cases should be accepted with caution, from the standpoint of both completeness of reporting and accuracy of diagnosis. In most instances they represent the cases actually reported by physicians. Supplemental reports from the State health officers, however, indicate that many cases are not being

seen by physicians, that estimates of total cases of upper respiratory conditions based on absenteeism (in school and industry) range from 1 percent to 25 percent, and that the infection is of mild type. Up to the week ended December 18, based on the number of reported cases, the New England, Middle Atlantic, and Pacific States were apparently the least affected.

The incidence of most of the other important communicable diseases declined during the week, although measles, meningococcus meningitis, and poliomyelitis are above the 5-year median expectancy. A total of 280 cases of meningococcus meningitis was reported, as compared with 287 for the preceding week and 89 cases of poliomyelitis as compared with 96.

Telegraphic morbidity reports from State health officers for the week ended December 18, 1948, and comparison with corresponding week of 1942 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—		Median 1938-42	Week ended—		Median 1938-42	Week ended—		Median 1938-42	Week ended—		Median 1938-42
	Dec. 18, 1943	Dec. 19, 1942		Dec. 18, 1943	Dec. 19, 1942		Dec. 18, 1943	Dec. 19, 1942		Dec. 18, 1943	Dec. 19, 1942	
NEW ENGLAND												
Maine.....	3	0	0	88	-----	-----	104	13	52	4	5	0
New Hampshire.....	0	0	0	2	-----	-----	2	13	1	0	0	0
Vermont.....	0	0	0	-----	-----	-----	0	129	21	3	0	0
Massachusetts.....	5	2	5	-----	-----	-----	245	328	302	8	6	1
Rhode Island.....	1	3	1	35	1	-----	81	4	4	4	5	0
Connecticut.....	0	0	1	219	3	5	8	329	68	4	2	1
MIDDLE ATLANTIC												
New York.....	25	21	21	1 357	1 12	1 14	531	660	660	47	17	4
New Jersey.....	4	3	9	163	9	9	321	40	30	14	6	1
Pennsylvania.....	15	9	14	44	2	-----	506	867	723	20	7	3
EAST NORTH CENTRAL												
Ohio.....	11	15	15	2,625	9	13	1,180	52	52	7	0	1
Indiana.....	1	3	14	1,469	15	15	139	21	14	1	1	1
Illinois.....	4	22	41	416	10	14	166	83	40	31	6	1
Michigan ¹	5	3	10	148	31	7	535	51	155	16	2	2
Wisconsin.....	0	2	0	962	49	44	504	227	186	12	3	0
WEST NORTH CENTRAL												
Minnesota.....	8	2	1	185	1	1	549	8	66	4	0	0
Iowa.....	1	3	3	4,002	-----	1	44	46	46	0	0	0
Missouri.....	5	4	11	149	4	4	15	6	6	18	3	1
North Dakota.....	2	1	1	1,141	12	12	164	2	2	0	0	0
South Dakota.....	2	1	2	25	-----	-----	66	52	7	0	0	0
Nebraska.....	0	4	2	349	31	-----	15	60	8	1	1	0
Kansas.....	1	9	6	788	3	16	19	71	71	3	0	1
SOUTH ATLANTIC												
Delaware.....	0	0	0	4	-----	-----	11	0	3	1	1	0
Maryland ¹	3	9	9	218	5	9	30	11	11	6	6	0
District of Columbia.....	1	0	0	1,349	3	2	36	2	2	4	2	0
Virginia.....	8	11	36	9,349	233	228	636	17	30	8	7	0
West Virginia.....	4	11	11	2,062	34	15	91	2	9	2	3	3
North Carolina.....	10	17	44	119	-----	8	239	2	270	3	2	0
South Carolina.....	7	4	5	1,498	460	448	69	0	10	4	0	0
Georgia.....	7	14	14	1,219	59	80	77	9	10	2	0	0
Florida.....	2	8	8	102	4	11	19	4	3	1	0	0
EAST SOUTH CENTRAL												
Kentucky.....	3	12	12	34,148	5	13	10	29	13	2	0	3
Tennessee.....	10	8	10	391	40	47	25	23	36	6	0	1
Alabama.....	17	8	23	886	40	98	150	2	35	5	0	0
Mississippi ¹	4	15	13	-----	-----	-----	-----	-----	-----	3	0	0
WEST SOUTH CENTRAL												
Arkansas.....	6	18	16	2,663	90	140	36	22	23	2	0	1
Louisiana.....	9	9	11	58	2	9	8	3	3	1	1	1
Oklahoma.....	9	9	16	999	30	91	8	23	23	0	1	1
Texas.....	49	38	50	5,309	873	671	99	5	26	2	4	1
MOUNTAIN												
Montana.....	1	3	1	2,468	-----	12	112	75	28	1	0	0
Idaho.....	0	0	0	4	-----	-----	3	25	25	0	0	0
Wyoming.....	0	0	0	227	148	4	8	23	8	0	1	0
Colorado.....	3	18	12	520	54	42	192	12	12	1	1	1
New Mexico.....	4	3	3	124	-----	-----	3	0	21	3	2	0
Arizona.....	2	1	7	1,106	73	110	21	7	7	1	0	0
Utah ¹	0	1	1	1,205	1	33	4	510	45	3	0	0
Nevada.....	0	0	0	21	-----	-----	1	105	0	0	0	0
PACIFIC												
Washington.....	15	7	6	1,490	-----	1	52	440	160	6	4	1
Oregon.....	5	2	2	760	16	23	55	285	53	3	3	1
California.....	23	19	19	1,185	52	52	126	81	120	14	6	3
Total.....	295	352	486	82,951	2,414	2,995	7,315	4,779	4,779	281	108	43
50 weeks.....	13,255	14,995	16,145	209,594	103,437	176,258	587,906	496,067	496,067	17,098	3,495	1,958

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended December 18, 1948, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Pollomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever ¹		
	Week ended—		Median 1938-42	Week ended—		Median 1938-42	Week ended—		Median 1938-42	Week ended—		Median 1938-42
	Dec. 18, 1943	Dec. 19, 1942		Dec. 18, 1943	Dec. 19, 1942		Dec. 18, 1943	Dec. 19, 1942		Dec. 18, 1943	Dec. 19, 1942	
NEW ENGLAND												
Maine.....	1	0	0	25	10	11	0	0	0	2	1	1
New Hampshire.....	0	0	0	5	3	3	0	0	0	2	0	0
Vermont.....	1	1	0	2	2	2	0	0	0	2	0	0
Massachusetts.....	3	1	1	193	267	169	0	0	0	1	5	3
Rhode Island.....	0	0	0	2	10	10	0	0	0	0	0	0
Connecticut.....	2	0	0	58	40	45	0	0	0	0	4	1
MIDDLE ATLANTIC												
New York.....	8	2	2	286	301	324	0	0	0	8	4	6
New Jersey.....	1	0	1	85	57	122	0	0	0	1	1	1
Pennsylvania.....	5	0	2	160	194	247	0	0	0	4	5	6
EAST NORTH CENTRAL												
Ohio.....	1	0	1	250	269	228	0	0	1	3	2	3
Indiana.....	0	0	0	40	29	108	1	1	1	0	0	3
Illinois.....	2	1	1	150	164	346	0	4	2	2	3	3
Michigan ²	0	1	1	151	78	203	1	0	1	6	3	3
Wisconsin.....	0	0	0	135	174	160	0	0	3	1	0	1
WEST NORTH CENTRAL												
Minnesota.....	0	1	2	120	67	92	0	0	6	0	0	0
Iowa.....	1	0	1	55	45	75	1	1	2	2	3	1
Missouri.....	2	0	1	48	52	59	0	0	1	1	1	3
North Dakota.....	0	0	0	14	13	25	0	0	1	0	0	0
South Dakota.....	1	1	0	34	29	31	0	0	0	0	0	0
Nebraska.....	1	1	1	33	10	30	1	1	1	0	0	0
Kansas.....	4	2	1	101	70	70	0	1	1	0	0	0
SOUTH ATLANTIC												
Delaware.....	0	0	0	3	5	11	0	0	0	0	0	0
Maryland ²	1	0	0	43	37	51	0	0	0	0	1	3
District of Columbia.....	0	0	0	27	14	9	0	0	0	1	1	1
Virginia.....	0	0	0	38	37	45	0	0	0	0	4	5
West Virginia.....	0	1	1	58	42	52	0	1	0	0	0	1
North Carolina.....	0	2	2	72	67	78	1	1	0	0	3	3
South Carolina.....	0	1	1	12	9	12	0	1	0	0	0	1
Georgia.....	0	0	0	29	16	35	0	0	0	5	1	4
Florida.....	1	3	0	7	12	6	0	0	0	2	1	2
EAST SOUTH CENTRAL												
Kentucky.....	6	0	1	45	52	77	1	0	0	4	9	3
Tennessee.....	0	1	0	47	37	60	0	0	0	3	1	1
Alabama.....	0	0	1	10	23	23	1	0	0	2	0	1
Mississippi ²	1	1	1	4	8	16	0	1	0	0	2	2
WEST SOUTH CENTRAL												
Arkansas.....	1	0	0	11	5	16	0	0	1	2	0	4
Louisiana.....	1	0	0	8	3	7	1	0	0	4	1	7
Oklahoma.....	1	0	1	22	13	27	0	0	4	1	1	3
Texas.....	3	28	1	52	55	55	3	2	2	4	6	6
MOUNTAIN												
Montana.....	0	0	0	48	12	24	0	0	1	0	0	1
Idaho.....	0	0	0	40	10	13	0	0	0	1	0	1
Wyoming.....	0	0	0	6	25	8	0	0	0	0	0	0
Colorado.....	0	0	0	31	35	28	0	0	0	0	1	1
New Mexico.....	2	0	0	5	4	10	0	0	0	1	3	2
Arizona.....	1	2	1	14	3	5	0	0	0	0	0	0
Utah ¹	8	0	0	94	49	26	0	0	0	0	0	0
Nevada.....	0	0	0	0	0	0	0	0	0	1	0	0
PACIFIC												
Washington.....	0	3	3	114	21	37	0	0	0	0	1	0
Oregon.....	14	0	0	52	16	19	0	0	0	0	0	1
California.....	16	9	3	171	136	136	0	0	2	4	4	4
Total.....	89	60	60	3,015	2,630	3,130	11	14	62	70	72	119
50 weeks.....	12,319	4,107	7,203	134,742	121,468	149,649	724	764	2,354	5,376	6,603	9,405

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended December 18, 1943, and comparison with corresponding week of 1942 and 5-year median—Con.

Division and State	Whooping cough			Week ended Dec. 18, 1943								
	Week ended--		Median 1938-42	Anthrax	Dysentery			Encephalitis, infectious	Leptosy	Rocky Mt. spotted fever	Tularemia	Typhus fever
	Dec. 18, 1943	Dec. 19, 1942			Amebic	Bacillary	Unspecified					
NEW ENGLAND												
Maine.....	6	39	45	0	0	0	0	0	0	0	0	0
New Hampshire.....	0	8	8	0	0	0	0	1	0	0	0	0
Vermont.....	10	41	41	0	0	0	0	0	0	0	0	0
Massachusetts.....	70	308	226	1	0	0	5	0	0	0	0	0
Rhode Island.....	6	40	34	0	0	0	0	0	0	0	0	0
Connecticut.....	19	80	86	0	0	0	0	0	0	0	0	0
MIDDLE ATLANTIC												
New York.....	196	410	430	0	3	19	0	3	0	0	0	0
New Jersey.....	49	152	174	0	0	0	0	0	0	0	0	0
Pennsylvania.....	99	323	323	1	0	0	0	0	0	0	1	0
EAST NORTH CENTRAL												
Ohio.....	66	205	216	0	0	0	0	0	0	0	2	0
Indiana.....	14	16	16	0	0	0	0	0	0	0	3	0
Illinois.....	52	162	176	0	0	2	0	1	0	0	2	0
Michigan ¹	128	232	272	0	3	0	0	0	0	0	1	0
Wisconsin.....	177	297	273	0	0	0	0	2	0	0	0	0
WEST NORTH CENTRAL												
Minnesota.....	28	72	67	0	2	0	0	0	0	0	0	0
Iowa.....	19	27	16	0	0	0	0	0	0	0	0	0
Missouri.....	12	10	20	0	0	0	1	0	0	0	1	0
North Dakota.....	6	15	11	0	0	0	0	0	0	0	0	0
South Dakota.....	5	3	2	0	0	0	0	0	0	0	0	0
Nebraska.....	13	12	3	0	0	0	0	0	0	0	0	0
Kansas.....	16	41	33	0	0	0	0	0	0	0	1	0
SOUTH ATLANTIC												
Delaware.....	8	6	6	0	0	0	0	0	0	0	0	0
Maryland ¹	46	79	71	0	0	0	0	0	0	0	0	0
District of Columbia.....	1	14	14	0	0	0	0	0	0	0	0	0
Virginia.....	100	43	43	0	0	0	34	0	0	0	1	1
West Virginia.....	43	5	24	0	0	0	0	0	0	0	0	0
North Carolina.....	117	28	118	0	0	0	0	0	0	0	2	7
South Carolina.....	95	29	29	0	0	4	0	0	0	0	0	0
Georgia.....	9	6	9	0	0	4	0	0	0	0	0	0
Florida.....	22	2	4	0	1	1	0	0	0	0	0	2
EAST SOUTH CENTRAL												
Kentucky.....	68	23	60	0	0	0	0	0	0	0	1	0
Tennessee.....	23	35	35	0	0	0	2	0	0	0	1	1
Alabama.....	15	126	50	0	0	0	0	0	0	0	2	16
Mississippi ²				0	0	0	0	0	0	0	0	2
WEST SOUTH CENTRAL												
Arkansas.....	17	18	11	0	1	0	0	0	0	0	0	1
Louisiana.....	5	5	4	0	0	1	0	0	0	0	0	6
Oklahoma.....	3	5	4	0	0	0	0	0	0	0	0	0
Texas.....	126	145	90	0	15	420	0	0	0	0	0	33
MOUNTAIN												
Montana.....	3	10	14	0	0	0	0	0	0	0	0	0
Idaho.....	1	3	3	0	0	0	0	1	0	0	0	0
Wyoming.....	6	3	3	0	0	0	0	0	0	0	0	0
Colorado.....	31	14	38	0	0	0	0	0	0	0	0	0
New Mexico.....	11	3	16	0	0	3	0	1	0	0	0	0
Arizona.....	16	1	5	0	0	0	9	0	0	0	0	0
Utah ¹	19	27	23	0	0	0	0	0	0	0	1	0
Nevada.....	0	0	0	0	0	0	0	0	0	0	0	0
PACIFIC												
Washington.....	64	32	32	0	0	0	0	0	0	0	0	0
Oregon.....	30	2	16	0	0	0	0	0	0	0	0	0
California.....	83	203	151	0	3	9	0	0	0	0	0	2
Total.....	1,951	3,370	3,633	2	28	463	51	9	0	0	19	49
50 weeks.....	173,808	172,825	1,2,829	65	2,078	17,562	4,281	669	29	435	765	4,393
50 weeks, 1942.....				78	1,147	11,887	6,327	549	45	451	859	3,585

¹ New York City only.

² Period ended earlier than Saturday.

³ Later reports from Kentucky show, for the week ended Dec. 11, an estimated total of more than 35,000 cases instead of the 5,416 originally reported by telegraph.

⁴ Including paratyphoid fever cases reported separately as follows: Massachusetts, 1; Illinois, 1; Georgia, 1; Florida, 2; Kentucky, 2; Tennessee, 1; California, 2.

WEEKLY REPORTS FROM CITIES

City reports for week ended Dec. 4, 1943

This table lists the reports from 87 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table

	Diphtheria cases	Euchephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, 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	0	13	0	4	0	8	0	0	3
New Hampshire:												
Concord.....	0	0	0	0	0	0	0	0	1	0	0	0
Vermont:												
Barre.....	0	0	0	0	0	0	0	0	0	0	0	0
Massachusetts:												
Boston.....	4	0	0	0	25	9	15	0	35	0	0	37
Fall River.....	0	0	0	0	0	0	3	0	3	0	0	3
Springfield.....	0	0	0	0	3	0	1	0	14	0	0	1
Worcester.....	0	0	0	0	0	0	6	0	21	0	0	6
Rhode Island:												
Providence.....	0	0	1	0	61	1	4	0	2	0	0	19
Connecticut:												
Bridgeport.....	0	0	0	0	0	0	5	0	9	0	0	0
Hartford.....	0	0	0	0	0	1	0	1	3	0	0	2
New Haven.....	0	0	1	0	1	0	2	0	3	0	1	1
MIDDLE ATLANTIC												
New York:												
Buffalo.....	1	0	2	4	2	3	0	7	0	0	0	5
New York.....	10	1	14	4	253	22	78	7	138	0	7	42
Rochester.....	0	0	0	1	1	1	6	0	5	0	0	6
Syracuse.....	0	0	0	0	0	1	2	0	2	0	0	38
New Jersey:												
Camden.....	1	0	1	0	0	0	0	0	8	0	0	0
Newark.....	0	0	5	0	3	1	4	0	7	0	0	8
Trenton.....	0	0	1	0	1	0	5	0	7	0	0	0
Pennsylvania:												
Philadelphia.....	2	0	5	3	6	10	34	3	43	0	0	22
Pittsburgh.....	2	0	0	0	137	6	19	0	26	0	2	6
Reading.....	0	0	1	0	0	1	3	0	1	0	0	0
EAST NORTH CENTRAL												
Ohio:												
Cleveland.....	0	0	2	0	75	4	9	0	50	0	0	35
Columbus.....	1	0	1	1	3	1	5	0	17	0	0	22
Indiana:												
Fort Wayne.....	0	0	0	1	0	0	0	0	1	0	0	0
Indianapolis.....	1	0	3	0	0	0	6	0	16	0	0	6
South Bend.....	0	0	0	46	0	0	2	0	0	0	0	0
Terre Haute.....	0	0	0	0	0	0	0	0	1	0	0	0
Illinois:												
Chicago.....	3	0	14	0	14	11	36	2	54	0	2	41
Springfield.....	0	0	55	0	15	0	2	0	1	0	0	0
Michigan:												
Detroit.....	5	1	3	1	5	8	22	1	50	0	1	42
Flint.....	0	0	0	0	12	0	2	0	9	0	0	2
Grand Rapids.....	0	0	0	0	22	0	0	0	3	0	0	6
Wisconsin:												
Kenosha.....	0	0	0	0	0	5	0	3	0	0	0	2
Milwaukee.....	0	0	4	4	3	2	3	0	38	0	0	31
Racine.....	0	0	0	0	0	0	3	0	5	0	0	4
Superior.....	0	0	0	0	103	0	0	0	0	0	0	2
WEST NORTH CENTRAL												
Minnesota:												
Duluth.....	0	0	0	0	20	0	1	0	6	0	0	25
Minneapolis.....	10	0	1	59	2	1	0	20	0	0	0	0
St. Paul.....	1	1	1	38	2	3	0	11	0	0	0	20
Missouri:												
Kansas City.....	1	0	2	0	8	1	5	0	18	0	0	2
St. Joseph.....	0	0	0	0	0	0	0	0	1	0	0	0
St. Louis.....	0	0	6	0	0	3	29	0	13	0	0	12

City reports for week ended Dec. 4, 1943—Continued

	Diphtheria cases	Encephalitis, 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	0	0	0	13	0	1	0	0	0	0	0
Nebraska:												
Omaha.....	6	0	0	0	0	0	6	0	7	0	0	2
Kansas:												
Topeka.....	0	0	0	0	0	0	4	0	1	0	0	8
Wichita.....	0	0	0	0	5	0	5	0	3	0	0	0
SOUTH ATLANTIC												
Delaware:												
Wilmington.....	1	0	0	0	2	0	3	0	0	0	0	2
Maryland:												
Baltimore.....	4	0	4	2	15	6	24	0	24	0	1	25
Cumberland.....	0	1	0	0	0	0	1	0	0	0	0	0
Frederick.....	0	0	0	0	0	0	0	0	0	0	0	0
District of Columbia:												
Washington.....	0	0	4	0	13	2	10	0	25	0	0	4
Virginia:												
Lynchburg.....	0	0	0	0	403	0	0	0	1	0	0	11
Richmond.....	0	0	0	0	7	2	1	0	5	0	0	2
Roanoke.....	0	0	0	0	0	0	0	0	0	0	0	1
West Virginia:												
Charleston.....	0	0	0	0	9	0	0	0	5	0	0	0
Wheeling.....	0	0	0	0	0	0	1	0	0	0	0	0
North Carolina:												
Winston-Salem.....	0	0	0	0	8	0	0	0	2	0	0	1
South Carolina:												
Charleston.....	0	0	62	0	11	1	1	0	1	0	0	0
Georgia:												
Atlanta.....	1	0	57	1	2	0	5	0	1	0	0	0
Brunswick.....	1	0	0	0	10	1	0	0	1	0	0	0
Savannah.....	0	0	1	0	0	1	1	0	7	0	0	0
Florida:												
Tampa.....	0	0	0	0	0	1	4	0	0	0	0	0
EAST SOUTH CENTRAL												
Tennessee:												
Memphis.....	0	0	55	4	2	1	4	0	1	0	0	6
Nashville.....	0	0	0	0	1	0	0	0	4	0	0	1
Alabama:												
Birmingham.....	0	0	7	2	10	0	2	0	4	0	0	1
Mobile.....	0	0	1	1	0	1	2	0	2	0	0	0
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock.....	0	0	2	0	1	0	3	0	0	0	0	1
Louisiana:												
New Orleans.....	2	0	5	3	0	0	11	2	11	0	0	0
Shreveport.....	0	0	0	0	0	0	4	0	1	0	0	0
Texas:												
Dallas.....	1	0	0	0	0	0	7	0	2	0	1	2
Galveston.....	0	0	0	0	0	0	1	0	0	0	0	0
Houston.....	2	0	0	1	0	0	11	0	1	0	0	0
San Antonio.....	1	0	1	1	3	0	7	2	0	0	0	0
MOUNTAIN												
Montana:												
Billings.....	0	0	0	0	0	0	0	0	0	0	0	1
Great Falls.....	0	0	0	0	34	0	0	0	1	0	0	1
Helena.....	0	0	0	0	0	0	0	0	0	0	0	0
Missoula.....	0	0	0	0	0	0	1	0	4	0	0	0
Idaho:												
Boise.....	0	0	0	0	0	0	0	0	4	0	0	0
Colorado:												
Denver.....	2	0	45	0	4	1	8	0	1	0	0	37
Pueblo.....	0	0	0	0	68	0	1	1	3	0	0	2
Utah:												
Salt Lake City.....	0	0	0	0	7	0	1	2	14	0	0	1

City reports for week ended Dec. 4, 1943—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle.....	1	0	1	5	2	4	0	3	0	0	0	18
Spokane.....	0	0	0	11	0	2	0	22	0	0	1	1
Tacoma.....	0	0	0	4	0	0	1	15	0	0	0	8
California:												
Los Angeles.....	9	0	9	2	15	5	7	35	0	0	0	11
Sacramento.....	1	0	0	0	0	2	0	1	0	0	0	0
San Francisco.....	1	0	1	1	2	8	4	11	0	0	1	6
Total.....	75	4	367	39	1,602	112	477	35	892	1	17	604
Corresponding week, 1942.....	84	2	119	25	968	29	404	16	844	0	19	1,182
Average, 1938-42.....	108	2	460	30	920	2	384	-----	837	5	22	1,195

Dysentery, amebic.—Cases: Boston, 2; New York, 2; Atlanta, 1; San Francisco, 1.
Dysentery, bacillary.—Cases: Worcester, 2; New York, 10; Syracuse, 1; Philadelphia, 1; Detroit, 13; Charleston, S. C., 2; Los Angeles, 6.
Dysentery, unspecified.—Cases: San Antonio, 9.
Tularemia.—Cases: Providence, 1; Pittsburgh, 1; Fort Wayne, 1.
Typhus fever.—Cases: Charleston, S. C., 5; Savannah, 1; Birmingham, 1; Mobile, 14; New Orleans, 3; San Antonio, 1.

¹ 3-year average, 1940-42.
² 5-year median.

Rates (annual basis) per 100,000 population, by geographic groups, for the 87 cities in the preceding table (estimated population, 1942, 34,197,200)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Pollomyelitis 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.....	9.9	0.0	5.0	0.0	256	27.3	99.4	2.5	246	0.0	2.5	179
Middle Atlantic.....	7.1	0.4	11.6	4.5	181	19.6	68.7	4.5	109	0.0	4.0	57
East North Central.....	6.2	0.6	48.8	5.6	188	16.1	57.4	3.1	152	0.6	1.9	119
West North Central.....	35.2	2.0	15.6	3.9	279	15.6	107.5	0.0	176	0.0	0.0	135
South Atlantic.....	12.1	1.7	222.1	5.2	833	24.3	88.5	0.0	125	0.0	1.7	80
East South Central.....	0.0	0.0	368.2	41.6	77	11.9	47.5	0.0	65	0.0	0.0	48
West South Central.....	17.6	0.0	23.5	11.7	15	0.0	129.1	11.7	44	0.0	2.9	9
Mountain.....	16.1	0.0	361.8	0.0	908	9.0	88.4	24.1	217	0.0	0.0	338
Pacific.....	21.0	0.0	15.7	7.0	63	10.5	36.7	21.0	152	0.0	3.5	77
Total.....	11.4	0.6	56.0	5.9	244	17.1	72.7	5.3	136	0.2	2.6	92

TERRITORIES AND POSSESSIONS

Hawaii Territory

Honolulu—Dengue fever.—For the week ended December 4, 1943, 62 new cases of dengue fever were reported in Honolulu, T. H., bringing the total number of cases to date to 1,250.

Plague (rodent).—A rat found on November 17, 1943, in Kapulena area, Hamakua District, Island of Hawaii, T. H., has been proved positive for plague.

Panama Canal Zone

Notifiable diseases—October 1943.—During the month of October 1943, 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	2				4		2		8	
Diphtheria	7				1		1		9	
Dysentery (bacillary)	3				1				4	
Malaria ¹	15		3		177	1	70	1	265	2
Measles					1				1	
Mumps	15		17		101		6		139	
Paratyphoid fever	1				1		1		3	
Pneumonia		17		2	10			1	² 10	20
Scarlet fever			1						1	
Tuberculosis		24		4	3	2		10	³ 3	40
Typhoid fever	1								1	
Typhus fever					1				1	
Whooping cough		1								1

¹ 67 recurrent cases.

² Reported in the Canal Zone only.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended November 20, 1943.—During the week ended November 20, 1943, 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.....		9	1	299	401	77	106	148	133	1, 174
Diphtheria.....	1	13	3	42	3	7	4		1	74
Dysentery (bacillary).....				1					5	6
Encephalitis, infectious.....						1				1
German measles.....		1		5	10		1	6	8	31
Influenza.....					12				19	31
Measles.....		1		293	130	9	1	43	23	500
Meningitis, meningococcus.....			1	1	2				1	5
Mumps.....		2		31	124	44	3	26	168	398
Poliomyelitis.....			1	2		1			1	5
Scarlet fever.....		3	8	116	106	52	21	31	53	390
Tuberculosis (all forms).....			5	135	51	10		25	18	244
Typhoid and paratyphoid fever.....			2	10		1	1		5	19
Undulant fever.....					2				2	4
Whooping cough.....		23		206	162	23	20	15	61	510

PARAGUAY

Asuncion—Poliomyelitis.—A report dated December 3, 1943, states that the incidence of poliomyelitis has increased gradually in Asuncion for the past 2 weeks, where about 35 cases have occurred, with 5 to 10 cases occurring in the outlying districts near Asuncion.

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

NOTE.—Except in cases of unusual prevalence, 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 cumulative table showing the reported prevalence of 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.)

Plague

Azores.—During the year 1942, 54 cases of plague including 3 cases of pneumonic plague and 2 cases of septicemic plague were reported among the civil population of the Azores. Two cases of plague among the military population were also reported. The report also states

that for the year 1943 up to November 19, about the same number of cases of plague have occurred.

Ecuador—Loja Province.—During the period October 16–31, 1943, 2 cases of plague, with 1 death, were reported in Loja Province, Ecuador.

Madagascar.—During the period July 1–October 31, 1943, 13 cases of plague were reported in Madagascar.

Morocco—Casablanca.—During the period November 1–10, 1943, 4 cases of plague were reported in Casablanca, Morocco.

Typhus Fever

Guatemala.—During the month of October 1943, 145 cases of typhus fever, with 22 deaths, were reported in Guatemala.

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