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ENCEPHALITIS: STUDIES ON EXPERIMENTAL TRANSMISSION

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MONKEYS

In a preliminary report to the Metropolitan Health Council of St. Louis on September 8, 1933 (1), the authors gave a brief account of what they deemed to be the probable transmission of encephalitis (St. Louis epidemic) to *Macacus rhesus* monkeys.[1] Inoculations have been continued and apparently successful results have been secured from 7 of 15 fatal cases from which the attempt was made. Successful transfers were secured by making heavy inoculations (1.5 cc to 2.0 cc) of a thick brain emulsion intracerebrally, combined with 5 to 10 cc of the same emulsion intraperitoneally. The inoculations were repeated after an interval of 4 to 5 days. The symptoms observed in monkeys, while varying in degree, were uniform in character, and suggested those seen in human encephalitis. The first significant symptoms appeared in from 8 to 14 days following the first inoculation and began with an elevation of temperature, which tended to rise on successive days to a height of from 40.6° C. to 41.6° C. on the fourth or fifth day of the fever. When undisturbed, the animals usually sat hunched up with their eyes closed as if asleep and with the head bent forward. When disturbed, however, the ill animals seemed alert and often markedly excitable. Intention tremors, most noticeable in the forelegs and in the head, usually appeared about the second or third day and were often pronounced. Muscular weakness of one or more extremities and occasionally definite paralyses made their appearance during the febrile stage. Involvement of the eye muscles was not observed. The appetite usually continued good and the animals would often eat greedily throughout the febrile period. Constipation was often present. Spinal fluid at the height of the fever was usually under increased pressure, clear, and commonly showed cell counts of from 150 to 350 cells.

[1] Eight *Cebus* and two Java macaque monkeys proved to be refractory.

The animals were usually sacrificed for transfer on from the second to fifth day of fever, but in a few instances the disease was allowed to run its course. In these instances the monkeys recovered completely. There were no spontaneous deaths, although some animals were apparently very ill when sacrificed and it seemed probable that some of them might have succumbed had they not been killed.

Three strains have now been successfully carried through 5 passages in monkeys with incubation periods varying from 8 to 21 days. Only about 40 percent of inoculated monkeys developed symptoms, although the acuteness of the illness in animals coming down during the fourth and fifth transfers suggests that the virulence may be increasing.

A few attempts to convey the disease by means of nasopharyngeal washings, spinal fluid, and blood have failed. This can hardly be taken to mean, however, that the virus is absent from these fluids, since the susceptibility of the monkey is apparently low.

The pathological picture is consistent with that seen in human cases during the epidemic and includes marked congestion with perivascular round cell infiltration, together with some nerve cell destruction, scattered diffusely through the brain, bulb, and cord.

The virus persists in 50 percent glycerin for at least one week.

WHITE MICE

Attempts to transfer the disease to various other species of laboratory animals were without suggestive results except in the case of white mice.

We were informed by Dr. L. T. Webster, of the Rockefeller Institute for Medical Research, that a virus had been encountered by intracerebral inoculation of material from human encephalitis, furnished to him, into a strain of mice bred in his laboratory. Accordingly, stock mice were inoculated intracerebrally with brain emulsions of second passage monkeys. About 50 percent of these mice died after an incubation period of 5 to 7 days, and passage from these into other mice resulted in the uniform development of the disease. The course of illness in these animals and the pathological appearance were apparently similar to those observed by Dr. Webster in his special strains of mice.

RABBITS

A number of rabbits were inoculated intracerebrally with brain emulsion, spinal fluid, and blood, but no evidence of illness appeared in any of them. In addition to this lack of success in attempts at transmission to rabbits, the failure to secure positive results in eight *Cebus* monkeys following intracerebral inoculation with brain emulsions from

the *Rhesus* monkeys is further indication that herpes virus did not play an etiological role in the St. Louis epidemic.

Further studies on the strains of virus isolated are in progress.

REFERENCE

(1) Leake, J. P.: Jour. Am. Med. Assoc. (1933) 101: p. 928.

PRELIMINARY SURVEYS OF THE INDUSTRIAL ENVIRONMENT

By J. J. Bloomfield, *Sanitary Engineer, Office of Industrial Hygiene and Sanitation, United States Public Health Service*

In the study of industrial health problems it is necessary to accumulate certain fundamental data which may serve in the interpretation of these problems on a scientific basis. One outstanding example of such studies has been the investigations of the United States Public Health Service in connection with the influence of the inhalation of atmospheric dust on the health of workers in industrial environments. In all such investigations there are certain preliminary steps of fundamental importance which must be undertaken in order to serve as a guide in the more detailed studies to follow. Roughly, these preliminary steps may be divided into two parts—(1) the Sanitary Survey and (2) the Occupational Analysis.

The present contribution deals with the methods used in conducting a sanitary survey and occupational analysis of an industrial environment and attempts to show the need for such preliminary studies as a groundwork for the more detailed investigations which may be undertaken.

THE SANITARY SURVEY

The sanitary survey of the workroom environment may be likened to the inventory of materials and stock which a business establishment usually undergoes annually. The sanitary survey may well be regarded as a listing of the facilities afforded the workers while in the industrial environment. When one realizes that one third of the worker's day is spent in this environment, he clearly sees the necessity for a study of all those factors which bear on the health of the industrial worker.

United States Public Health Service—Field investigations

1. City ..... Establishment ..... Date .....
Type of building ..... Shop ..... Location .....
Size ..... Crowded .....
2. Ventilation—Natural ..... Ample ..... Deflectors ..... Artificial .....

Temperature							Remarks:
Dry							
Wet							
Hum							

3. Illumination—Natural ..... General impression ..... Maximum distance from window ..... Window space ..... Ratio to floor space ..... Type of window ..... Condition ..... Artificial—Type and No. ..... Shadows or glare ..... General impression .....

4. General conditions—Refuse cans ..... Cuspidor service ..... Sweeping service ..... Fire protection ..... Fire escapes ..... Coat rooms ..... Washing facilities ..... Eating facilities ..... Toilet facilities—Type and No. ..... Light ..... Ventilation ..... Condition ..... Ample ..... Male ..... Female ..... Drinking water .....

5. Safety hazards:

6. Fumes and gases:

7. Dust:

8. Specific poisons:

9. Exposure to heat or cold:

10. Fatigue:

11. Excessive noise:

12. Employees:

Process	Raw material	Finished product	Employee	Day shift				Night shift				Method of payment	Seats and backs	Replaceable by females	Hazards	Rest period	Exercise period
				Skilled		Unskilled		Skilled		Unskilled							
				M	F	M	F	M	F	M	F						
			Total..									Employees at Full Prod'n.			Color		

Absenteeism and labor turnover:

Remarks:

In the course of certain studies conducted in munition plants during the World War, Winslow and Greenburg (1) devised an inspection form which proved very useful in their studies of factory workrooms. For the past 9 years we have utilized this form in numerous investigations in industrial establishments throughout the United States, and have found that in nearly all instances the filling out of this form has proved a valuable guide and starting point in the study of the workroom environment. Since this form has already been discussed in detail elsewhere, it is only necessary at this time to state

briefly that under items 1 to 4 provision has been made to record general sanitary and hygienic data concerned chiefly with the workrooms. Under items 5 to 11 are noted those industrial hazards created more particularly by special processes and materials used in these processes. The reverse side of the inspection card deals mainly with the occupational analysis and will be discussed in more detail in the section of this paper dealing with this subject.

In practice the sanitary survey consists in carefully filling out the inspection form and jotting down any additional notes on items which may not be provided for in the form. Under certain conditions, such as may exist in a coal mine, or a cement mill, some of the items listed on the card may obviously be omitted. After filling out a survey card for each workroom in the entire plant, a detailed analysis of the data contained on the cards is then in order. It is such an analysis that enables one to form a picture of the hygienic conditions in each of the workrooms studied and in the plant as a whole.

One or two illustrations of an analysis of data obtained in a sanitary survey of a plant will suffice to clarify the technique involved in such an analysis. Reference to the inspection form shows that, under item 1, the size of each workroom is obtained and that, under item 12, the workroom population at full production is also recorded. Table 1 presents a survey of 50 workrooms and illustrates how the data on space allotment was handled.

TABLE 1.—*Distribution of workrooms according to per capita space allotment*

Square feet floor area per capita	Less than 25.	25 to 50	50 to 100	100 to 150	150 to 200	More than 200.
Number of rooms in each group	3	2	15	20	8	2.
Cubic feet per capita	Less than 250.	250 to 500	500 to 1,000	1,000 to 1,500.	1,500 to 2,000.	More than 2,000.
Number of rooms in each group	2	3	12	23	7	3.

According to the tentative code of the United States Public Health Service on workroom sanitation, 25 square feet of floor area per capita, or 250 cubic feet of air space per capita, may be considered as a fairly ample space allotment. In the light of these standards, the figures presented in table 1 show that 3, or 6 percent, of the rooms did not fulfill the requirement for area allotment, and that 4 percent of the rooms did not meet the standard for per capita cubic content. Similar analyses may be carried out for the other items listed in the survey form.

Several years ago, in studying the dust hazard in a modern factory, we thought it best to conduct a sanitary survey of the numerous workrooms in this factory in order to be able to locate the dusty workrooms and processes and to plan the dust-sampling schedules intelligently. As a result of such a sanitary survey, numerous safety

hazards were encountered in the various workrooms, and in addition a lead and benzol hazard (unknown to the plant officials) was also disclosed.

To recapitulate, the sanitary survey of workrooms in any plant yields definite information concerning the presence and extent of various health hazards and often serves as a guide in establishing which hazards require further study in the form of actual quantitative analyses, such, for example, as the determination of hydrogen sulphide in the spinning room of a rayon silk manufacturing plant using the viscose process. It is fully realized that many problems arise in industry for which there is no simple solution. Others require considerable expenditure of funds and ingenuity for their complete eradication. On the other hand, a sanitary survey of a factory will often disclose many minor conditions which require very little expenditure of money and effort to correct. The solution of such small problems may eliminate sources of ill health or unpleasantness to the industrial worker, so that the worker and, in the end, the plant management are the ones to benefit.

THE OCCUPATIONAL ANALYSIS

A very important part of any study of workroom environment is the occupational analysis, which permits one to learn of the activities involved and the particular hazards associated with each occupation. Such an analysis also discloses the number of persons in each occupation, which gives an idea of the importance of each hazard from the viewpoint of the numbers involved. Perhaps a typical example of such an analysis will serve to portray the value of the occupational analysis. For the sake of simplicity, an analysis of workrooms in which only one major hazard was found to exist is presented here, namely, the occupations involved in granite-cutting plants. Table 2 shows the various occupations followed in 14 typical granite-cutting plants (2).

TABLE 2.—*Analysis by occupation of certain granite-cutting sheds*

Occupation	Number of men	Occupation	Number of men
Granite cutters:		Sawyers	86
Pneumatic-tool workers	565	Engineers	
Surfacing-machine operators	68	Firemen	
Sand-blast operators	4	Draftsmen	
Carvers and letterers	24	Foremen	
Lathe operators and others	41	Blacksmiths	
Tool grinders	20	Carpenters	
Lumpers	164	Night watchmen	
Boxers		Clerks	
Cranemen		Salesmen	
Polishers		Superintendents	
Bed setters		Manufacturers	
Tool carriers			
Machinists		Total	972
Laborers			
Stone washers			

There are several important facts to be derived from a study of the occupations in granite-cutting plants, such as in the analysis presented in table 2. First, the processes involved in granite stone-cutting may be divided roughly into two parts; namely, those occupations dealing with the actual cutting of the stone and the additional labor necessary for the conduct of the former processes. Examination of table 2 shows that under the heading of granite cutters there are five general occupations. Also by far the greatest number of persons are engaged in tasks involving the production of dust (72 percent). Furthermore, it shows that 565 of the 702 persons creating dust are engaged in work involving the use of the hand pneumatic tool, a device well known to be productive of enormous quantities of dust. It is at once obvious from such an analysis that considerable time should be devoted to the study of the dust exposure of granite cutters in general and of hand pneumatic tool workers in particular. The results of such a study are presented in table 3.

TABLE 3.—*Ranking the various occupations in the granite-cutting industry according to dust exposure*

Occupation	Number of men exposed	Number of observations	Dust count in millions of particles per cubic foot		
			Minimum	Maximum	Average
All pneumatic hand tool operators	565	56	2.4	201.0	59.2
Surface cutters, inside	58	34	.6	165.7	44.0
Surface cutters, outside	10	10	14.0	102.2	43.9
Carvers and letterers	24	20	11.7	99.8	37.0
Tool grinders	20	14	6.3	62.0	27.1
General plant atmosphere	121	42	2.5	64.0	20.2
Lathe operators	4	4	6.0	25.7	17.9
Polishers	43	16	1.3	26.8	9.0
Sandblast operators	4	6	1.9	13.4	6.2
Sawyers	10	4	4.0	4.9	4.6
Blacksmiths and others	103	5	.9	8.2	2.5
Office employees	10	4	1.5	2.4	1.9

As a result of a prolonged study of the health of the workers engaged in the various occupations of granite cutting, it was possible to demonstrate that those persons engaged for many years in tasks associated with a dust exposure of less than 10 million particles per cubic foot of air were not suffering from silicosis or tuberculosis, the diseases most prevalent among these granite cutters. It was also possible to demonstrate that among these granite cutters the incidence of silicosis and tuberculosis, all other factors being equal, was directly proportional to the degree of dust exposure.

The importance of an occupational analysis from the viewpoint of determining the extent of an occupational hazard is at once obvious. Such an analysis is of still greater importance in the subsequent steps necessary for the elimination of a condition known to be inimical to health. Unless one knows definitely which occupations in a work-

room, containing many diverse processes and activities, are associated with unhealthful conditions, it is impossible to map out a constructive and effective program of prevention. We have just seen that, in the case of the granite-cutting study, the problem resolves itself to keeping the dust content of the workroom air below the level of that associated with those occupations found to be free from silicosis and tuberculosis, even after many years of industrial exposure; namely, those occupations exposed to less than 10 million particles of dust per cubic foot of air. The same technique may be applied to other industrial problems which, on first examination, seem more difficult of solution than the case just cited. Perhaps another single illustration from our experience will demonstrate the value of the occupational analysis as a guide in the elimination of industrial health hazards.

Studies of industrial morbidity made by the United States Public Health Service (3) indicate that the greatest percentage of lost time in industry is caused by respiratory disease. One of these studies showed that pneumonia, in all forms, occurred in nearly twice the amount among iron and steel workers as it did among the employees of other industries during a 3-year period of observation. A 5-year inquiry into the causes of high pneumonia sickness rates among iron and steel workers in a representative mill disclosed the fact that the largest number of pneumonia cases occurred in certain departments, such as in the blast furnace and open-hearth steel-making plants. When one realizes, however, that these departments contain anywhere from 60 to 100 different occupations, the task of a preventive program is a hopeless one unless definite information is obtained concerning such important factors as (1) the number of persons in each occupation, (2) the activities associated with each occupation, (3) the health hazards associated with each occupation, and (4) the incidence of pneumonia for each occupation. Such information is available from an occupational analysis of each department. For example, in the iron and steel plant under consideration, morbidity statistics for the period of 1924–27 showed that 38 cases of pneumonia occurred among the 1,637 bituminous coal miners employed during the same period in the mines operated in connection with this iron and steel plant. An occupational analysis disclosed the fact that there were 69 different occupations in the mines and that 33 of the total of 38 pneumonia cases were associated with only two occupations, those of pick mining and the loading of coal. The pneumonia rate per 1,000 men for miners and loaders was shown, by this study to be 31, whereas the rate for all other mine workers was found to be only 8.5 per 1,000. It is quite obvious, therefore, that of the 69 occupations involved in the mining of coal, our attention should be concentrated on the activities of coal miners and loaders in an attempt to determine

those factors in the industrial process and environment which contribute to the high pneumonia incidence experienced by these workers.

Having determined which occupations in a certain industrial environment are of sufficient importance to be studied in detail, the next step in our occupational analysis is the study of the various activities and processes involved in each occupation, in an effort to evaluate the importance of each activity in the problem at hand. Such a detailed study often reveals the necessary steps to be taken in a solution of the problem.

For example, experience has taught us that the various operations comprising the processes of most dusty occupations are usually associated with dissimilar dust exposures. For this reason it is essential to estimate the amount of time spent in each activity in any one occupation and to determine the dust exposure for each activity in that occupation. Let us take the case of a Leyner driller in a granite-cutting quarry. Table 4 presents a summary of the dust exposure of Leyner drillers in a typical granite quarry.

TABLE 4.—*Summary of dust exposure of Leyner drillers in a granite quarry*

Activity	Average dust exposure in millions of particles per cubic foot of air (*a*)	Number of hours spent in each activity (*b*)	Particle-hours in millions per cubic foot (*a*×*b*)
Drilling	213.4	4	853.6
Changing drills	9.8	1	9.8
Watching drills	8.0	2	16.0
Broaching	6.0	¾	4.5
Blowing off holes	1,085.0	¼	271.3
Total		8	1,155.2

$$\frac{1{,}155.2 \text{ particle-hours in millions per cubic foot}}{8 \text{ hours}} = 144.4 \text{ million particles per cubic foot}$$

It will be seen from table 4 that a Leyner driller has five different dust exposures. A differential analysis, such as the one presented in table 4, yields several valuable findings. First, it enables one to obtain a true average dust exposure for workers engaged in the occupation of Leyner drilling. (In this case the weighted average is 144.4 as contrasted with 213.4 million particles per cubic foot found during drilling operations only.) Second, it enables one to determine which activity, or activities, contribute the most to the dust hazard. In this instance it is quite evident that the practice of blowing-off holes by means of inserting a compressed air line into each hole is attended with an exceedingly great amount of dust; and though it is an activity lasting but 15 minutes of the 8-hour working day, it is one

which is responsible for 23 percent of the total dust exposure. It is evident that 23 percent of the Leyner driller's dust exposure may be at once eliminated by the prohibition of this practice. (Dust removal devices, such as the Kelley dust trap have not, at this writing, come into use in granite quarries.) And lastly, such an analysis indicates the necessity for devoting all one's efforts to the removal of dust during the drilling process, since this activity accounts for 74 percent of the total dust exposure, although a Leyner driller spends but one half of the working day at his drill.

In practice, the making of an occupational analysis has for its basis the filling out of item 12 of the survey form. The data obtained cover such subjects as the manufacturing process, the raw materials entering into the process, and the finished product associated with the occupation of each employee. To obtain such data makes it necessary for the investigator to become thoroughly familiar with the activities of each occupation and the processes of the workroom as a whole. One must not take anything for granted in a study of this sort. For example, in a study of the hazards involved in the application of radium paint to watch and clock dials in a certain workroom, one of the employees listed was the foreman supervising the work of the radium dial painters. Upon close observation and questioning it was discovered that this worker, in addition to allotting and supervising the work of each painter, spent one hour a day in mixing paint for all the dial painters and once a month blended various radium powders in such a manner that he was exposed to the inhalation of enormous quantities of radioactive dust. This latter brief exposure to radioactive dust was of far more significance from the viewpoint of radium poisoning than his total exposure to radio-active dust during his supervisory duties.

The remaining subjects listed under item 12 of the survey form are all of a simple nature, but are often of assistance in presenting a complete picture of the workroom environment, and at times serve to explain certain unusual phenomena. Take, for example, the subject of labor turnover. In a certain lead storage-battery factory the plant officials pointed to the small number of lead poisoning cases occurring in their plant to show that this disease was not an important problem in their workrooms. Investigations of the workroom atmosphere disclosed that in the lead mixing and pasting rooms of this plant enormous quantities of lead dust were present, quantities sufficient to produce lead poisoning in a comparatively brief period of exposure, as judged by our present knowledge of lead poisoning. Further inquiries revealed the fact that the labor turnover in these two workrooms was very great, in fact so great that the men left employment before really serious symptoms of lead poisoning manifested themselves among the workers. Whether or not such practice

is commendable or sound economic procedure is not within the province of this discussion. Suffice it to say that the presence of a high labor turnover in times of normal production is often highly suggestive of unhealthful or unpleasant working conditions.

The remaining subjects under the item dealing with employees, need no further comment, since their purpose will be quite obvious to the average investigator. It is often very helpful to obtain a sketch or blueprint of the workroom layout, on which may be noted such important items as the location of ventilating systems, points of sampling, and any other data bearing on the problem under study. This data may then be used in the subsequent steps of an investigation of this type, namely, the recommendations necessary to eradicate certain unhealthful or unpleasant conditions which the study may have disclosed.

REFERENCES

1. Winslow, C.-E. A., and Greenburg, Leonard: A Useful Factory Inspection Form. Pub. Health Repts., vol. 37, no. 1, Jan. 6, 1922.

2. Pub. Health Bull. No. 187, U.S. Public Health Service, 1929.

3. Brundage, D. K., and Bloomfield, J. J.: The Pneumonia Problem in the Steel Industry. Jour. Ind. Hyg., vol. 14, no. 10, December 1932.

THE HEALTH OF WORKERS IN A TEXTILE PLANT

A report has recently been issued by the Public Health Service on the health of workers in a cotton-cloth manufacturing plant [1] (carding, spinning, and weaving rooms). The investigation included an occupational analysis, sanitary survey, determination of dust concentration; dry- and wet-bulb temperature readings every 2 hours throughout the 24 for the period of the study; sickness records by cause and duration; complete physical examination of a large percentage of the workers.

In view of the low concentrations of dust encountered, it became apparent that no adverse effect on health was to be anticipated from this source. The high temperatures and humidities to which the workers were subjected were found to be the most important health factors in the occupational environment, and this fact made it desirable to deal with these conditions in a separate report. The report of the results of the dust study is included in another bulletin,[2] being a contribution to the studies of workers in dusty trades.

The study gives a fairly accurate picture of the temperature and humidity conditions which one may expect to find in a textile plant

[1] The Health of Workers in a Textile Plant, by Rollo H. Britten, J. J. Bloomfield, and Jennie C. Goddard. Public Health Bulletin No. 207. July 1933.

[2] Health of Workers in Dusty Trades. IV. Exposure to Dust in a Textile Plant, by J. J. Bloomfield and W. C. Dreessen. Public Health Bulletin No. 208.

in the Southern States in which air conditioning (apart from the introduction of moisture) is not used. In spite of the uncomfortable conditions demonstrated to exist, especially in the weaving rooms, no definite effect on health was established. Thus the observation by English investigators to the effect that there was no excess of sickness in the humid sheds as compared with the nonhumid sheds seems to be borne out in this study, although workers in this investigation were exposed to a much more severe condition of temperature and humidity.

The most important specific findings are as follows:

All room-groups show distinctly lower temperatures in the winter; but it is notable that the averages even in winter are never less than 80°.

As would be expected, in view of the use of artificial humidification in the weaving rooms, a much higher relative humidity (about 85 percent) was found in these rooms than in the others (52 to 58 percent).

During the summer the average effective temperature in all the rooms showed a condition which would be expected, on the basis of comments in the literature, to have a bad effect on health. The winter readings in the weaving rooms are of the same magnitude as the summer readings in the other rooms.

The rate of illness for cases of all durations was higher than that found in other studies of this nature. However, the rate of cases of 8 days' duration and longer and for serious conditions (such as tuberculosis, pneumonia, etc.) was very low. The sickness rate was definitely higher for night workers than for day workers.

From the physical examinations the only respiratory rate showing percentages of striking nature is that of nasal pharyngeal catarrh (from 22 to 45 percent by room). There was a definite tendency for the workers to be under the average weight of American industrial workers. This tendency was not more pronounced, however, with increasing length of service.

COURT DECISION RELATING TO PUBLIC HEALTH

Interference with township board of health in clearing out ditch enjoined.—(New Jersey Court of Chancery; *Board of Health of Caldwell Township* v. *Shaw et al.*, 167 A. 869; decided Aug. 2, 1933.) Suit was brought to enjoin the defendants from interfering with the relators, the board of health of Caldwell Township, in clearing out a ditch through the land of defendants. The ditch, with the exception of that part on defendants' land, had been cleared out by the relators, but they were prevented by the defendants from completing the work. The portion running through defendants' land had been partly filled up with debris and had been filled in in one part by the defendants so as to enable them to cross it. As a result, pools of stagnant water

formed on defendants' land, constituting breeding places for mosquitoes. The relators introduced testimony to the effect that clearing out the ditch and removing the obstruction, in connection with the work already done elsewhere, would give a sufficient fall to drain the land in question, and they offered not only to do this work at their own expense but to put in a suitable culvert over the ditch so as to provide a proper crossing for defendants' wagons.

The defendants resisted the suit on the ground that the conditions did not constitute a nuisance within the meaning of the statute conferring power upon the chancery court to grant relief to abate a nuisance on suit by the board of health, conferred by sections 28 and 29 of the health act (2 Comp. St. 1910, pp. 2668, 2669, secs. 28, 29). They also contended that the suitable and proper way to drain the tract was by another and shorter ditch in another direction. The vice chancellor, in holding that a decree would be advised granting to relators the relief prayed for, said:

I think it is clear from the statutes that the conditions described constitute a nuisance within the meaning of the cited sections of the health act. It was shown to my satisfaction that the creation of the pools of stagnant water are hazardous to public health because of their furnishing breeding grounds for mosquitoes. It has been held that conditions hazardous to the public health referred to in the statutes need not necessarily mean those proven to be actually injurious but likely to become a menace to health. *Board of Health* v. *Schmidt*, 83 N.J. Eq. 35, 90 A. 239.

DEATHS DURING WEEK ENDED OCT. 14, 1933

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

	Week ended Oct. 14, 1933	Corresponding week 1932
Data from 85 large cities of the United States:		
Total deaths	7,095	7,128
Deaths per 1,000 population, annual basis	9.9	10.2
Deaths under 1 year of age	545	542
Deaths under 1 year of age per 1,000 estimated live births (81 cities)	46	45
Deaths per 1,000 population, annual basis, first 41 weeks of year	10.8	11.1
Data from industrial insurance companies:		
Policies in force	67,564,991	70,259,724
Number of death claims	9,661	10,494
Death claims per 1,000 policies in force, annual rate	7.5	7.8
Death claims per 1,000 policies, first 41 weeks of year, annual rate	9.8	9.6

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

Reports for Weeks Ended Oct. 21, 1933, and Oct. 22, 1932

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Oct. 21, 1933, and Oct. 22, 1932

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Oct 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932
New England States:								
Maine	3	3	----	----	1	----	0	1
New Hampshire	----	----	----	----	2	----	0	0
Vermont	----	----	----	----	----	----	0	0
Massachusetts	34	20	----	2	46	51	0	2
Rhode Island	1	10	----	1	1	----	0	0
Connecticut	1	1	5	2	1	7	0	0
Middle Atlantic States:								
New York	53	56	[1] 10	[1] 15	149	123	2	4
New Jersey	25	24	5	23	13	82	2	1
Pennsylvania	70	107	----	----	52	148	4	2
East North Central States:								
Ohio	60	87	5	5	22	38	0	0
Indiana	125	108	37	26	6	6	3	0
Illinois	51	123	9	21	19	33	7	5
Michigan	27	23	4	11	7	46	1	0
Wisconsin	7	17	25	30	19	27	0	0
West North Central States:								
Minnesota	17	31	----	----	2	67	0	2
Iowa [2]	20	23	----	----	----	4	0	0
Missouri [2]	85	74	3	----	4	15	1	0
North Dakota	3	1	1	----	----	9	0	0
South Dakota	2	7	----	----	26	3	0	0
Nebraska	2	33	1	1	1	----	0	0
Kansas	34	46	----	2	5	7	2	0
South Atlantic States:								
Delaware	2	6	----	----	1	2	0	0
Maryland [2]	30	20	6	4	2	4	0	1
District of Columbia	9	2	1	1	1	3	0	0
Virginia	159	72	----	----	11	31	0	0
West Virginia	99	82	15	13	1	32	2	1
North Carolina	186	92	15	5	25	42	2	0
South Carolina [2]	50	31	291	379	26	3	0	0
Georgia [2]	60	70	----	----	48	2	1	0
Florida [2]	12	20	1	3	2	2	0	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Oct. 21, 1933, and Oct. 22, 1932—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932
East South Central States:								
Kentucky	198	77	----	6	----	12	0	0
Tennessee	116	108	63	33	76	1	1	8
Alabama [3]	75	110	9	27	9	3	0	0
Mississippi [3]	36	44	----	----	----	----	0	0
West South Central States:								
Arkansas	30	58	15	36	24	1	0	0
Louisiana	51	31	10	6	3	1	1	1
Oklahoma [4]	64	99	11	33	12	3	0	0
Texas [3]	233	233	72	54	8	10	2	0
Mountain States:								
Montana	2	1	----	----	4	208	0	0
Idaho	----	9	1	----	1	----	0	0
Wyoming	----	1	----	----	1	4	1	0
Colorado	13	8	----	----	6	2	1	0
New Mexico	12	54	1	12	14	2	0	0
Arizona	1	4	5	61	10	----	0	0
Utah [3]	3	1	2	----	12	2	0	0
Pacific States:								
Washington	8	1	----	----	12	2	2	0
Oregon	----	2	19	56	7	11	0	0
California	51	60	32	450	208	21	1	0
Total	2,120	2,090	674	1,318	900	1,070	36	23

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932
New England States:								
Maine	6	6	9	18	0	1	4	9
New Hampshire	0	0	26	4	0	0	2	0
Vermont	7	0	12	2	0	0	0	0
Massachusetts	4	0	137	204	0	0	4	6
Rhode Island	0	0	10	30	0	0	0	1
Connecticut	3	0	46	32	0	0	2	0
Middle Atlantic States:								
New York	31	9	227	240	0	7	27	24
New Jersey	9	12	71	111	0	0	10	8
Pennsylvania	10	32	339	279	0	0	44	50
East North Central States:								
Ohio	16	1	182	412	0	0	27	32
Indiana	1	1	148	116	0	1	12	19
Illinois	6	8	305	316	0	2	31	36
Michigan	3	6	218	197	1	0	22	19
Wisconsin	5	2	53	45	0	0	2	2
West North Central States:								
Minnesota	13	4	47	58	2	0	6	2
Iowa [3]	4	2	66	37	0	3	5	18
Missouri [3]	2	0	108	148	1	0	9	22
North Dakota	3	0	2	7	0	1	1	2
South Dakota	1	0	12	----	1	0	1	1
Nebraska	1	0	12	39	0	5	1	2
Kansas	0	2	141	82	1	0	5	1
South Atlantic States:								
Delaware	0	0	2	8	0	0	3	2
Maryland [3]	2	1	71	60	0	0	24	14
District of Columbia	0	4	10	16	0	0	5	0
Virginia	1	4	171	88	0	0	25	23
West Virginia	4	1	131	70	20	1	38	42
North Carolina	1	1	182	98	0	0	12	5
South Carolina [3]	1	0	19	13	0	0	17	15
Georgia [3]	1	2	33	36	0	0	27	37
Florida [3]	0	2	1	6	0	0	9	2

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Oct. 21, 1933, and Oct. 22, 1932—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932	Week ended Oct. 21, 1933	Week ended Oct. 22, 1932
East South Central States:								
Kentucky	1	0	205	66	4	0	31	20
Tennessee	1	1	146	106	2	0	36	22
Alabama [3]	0	0	51	69	0	1	11	18
Mississippi [3]	0	0	44	26	0	1	3	4
West South Central States:								
Arkansas	0	0	28	47	0	0	8	9
Louisiana	0	0	19	20	0	1	28	13
Oklahoma [4]	1	0	27	22	0	0	41	24
Texas [3]	1	1	105	86	5	4	86	18
Mountain States:								
Montana	0	0	28	8	0	4	7	9
Idaho	0	0	2	1	1	0	0	6
Wyoming	0	0	8	15	0	0	0	3
Colorado	0	0	21	25	10	0	2	1
New Mexico	0	0	22	13	0	0	20	12
Arizona	0	0	7	5	0	0	2	1
Utah [3]	2	0	10	1	0	0	0	0
Pacific States:								
Washington	6	0	23	15	3	2	3	5
Oregon	4	4	43	21	5	0	2	3
California	8	4	165	79	2	1	18	14
Total	159	110	3,746	3,397	58	35	673	576

[1] New York City, only.
[2] Week ended earlier than Saturday.
[3] Typhus fever, week ended Oct. 21, 1933, 62 cases, as follows: South Carolina, 1; Georgia, 25; Florida, 4; Alabama, 22; Texas, 10.
[4] Exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

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

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
September 1933										
Arizona	1	14	11	4	21		2	28	3	34
Delaware	2	5	1		4		0	24	0	10
Idaho		1	6				0	18	23	4
Illinois	12	97	29	51	63		56	496	1	122
Louisiana	4	66	20	502	8	24	4	31	0	75
Maryland	1	49	26	3	9	4	9	120	0	91
Minnesota	2	34	6	1	23		124	106	2	15
Montana		19	14		5		4	52	0	30
New Mexico		28	3	28	6	1	2	31	2	66
Pennsylvania	13	142		2	108		136	571	0	216
Puerto Rico		54	61	3,745	75		0		0	44
Rhode Island		4		1	4		5	47	0	1
Wisconsin	6	14	82	2	73		14	113	12	11

September 1933

	Cases
Actinomycosis:	
Minnesota	1
Montana	1
Arthrax:	
Pennsylvania	3
Chicken pox:	
Arizona	1
Delaware	2
Idaho	16

September 1933—Continued

	Cases
Chicken pox—Continued.	
Illinois	109
Maryland	35
Minnesota	59
Montana	37
New Mexico	5
Pennsylvania	166
Puerto Rico	21
Rhode Island	11
Wisconsin	198

September 1933—Continued

	Cases
Diarrhea:	
Maryland	47
Dysentery:	
Arizona	16
Illinois (amebic)	16
Illinois (bacillary)	27
Louisiana	5
Maryland	49
Minnesota (amebic)	4
Minnesota	1

September 1933—Continued

Dysentery—Continued.	Cases
Montana	50
New Mexico	24
Pennsylvania	4
Puerto Rico	212
Favus:	
New Mexico	1
Filariasis:	
Puerto Rico	41
Food poisoning:	
New Mexico	1
German measles:	
Arizona	1
Illinois	88
Maryland	4
Montana	2
New Mexico	1
Pennsylvania	18
Wisconsin	4
Hookworm disease:	
Louisiana	7
Impetigo contagiosa:	
Arizona	10
Illinois	4
Maryland	128
Montana	6
Lead poisoning:	
Illinois	3
Maryland	1
Leprosy:	
Maryland	1
Puerto Rico	1
Lethargic encephalitis:	
Arizona	2
Illinois	95
Louisiana	1
Minnesota	13
New Mexico	1
Pennsylvania	20
Rhode Island	2
Wisconsin	4
Mumps:	
Arizona	9
Delaware	2
Illinois	96
Louisiana	1
Maryland	23
Montana	3
New Mexico	10
Pennsylvania	171
Puerto Rico	63

September 1933—Continued

Mumps—Continued.	Cases
Rhode Island	2
Wisconsin	35
Ophthalmia neonatorum:	
Illinois	8
Maryland	1
Pennsylvania	7
Puerto Rico	9
Paratyphoid fever:	
Idaho	1
Illinois	4
Louisiana	2
New Mexico	2
Puerto Rico	1
Psittacosis:	
Minnesota	1
Puerperal septicemia:	
Illinois	2
Pennsylvania	20
Puerto Rico	5
Rabies in animals:	
Illinois	9
Louisiana	4
Maryland	5
Rhode Island	1
Rabies in man:	
Illinois	1
Rocky Mountain spotted fever:	
Montana	1
Scabies:	
Maryland	2
Montana	1
Septic sore throat:	
Arizona	7
Illinois	11
Louisiana	8
Maryland	4
Montana	1
New Mexico	3
Rhode Island	1
Tetanus:	
Delaware	1
Illinois	6
Louisiana	1
Maryland	1
New Mexico	1
Pennsylvania	9
Puerto Rico	11
Tetanus, infantile:	
Puerto Rico	20

September 1933—Continued

Trachoma:	Cases
Arizona	118
Minnesota	1
Pennsylvania	1
Puerto Rico	16
Wisconsin	2
Trichinosis:	
Illinois	1
Minnesota	1
Pennsylvania	4
Tularaemia:	
Illinois	4
Louisiana	3
Minnesota	1
Montana	2
Wisconsin	1
Typhus fever:	
Illinois	1
Maryland	2
Undulant fever:	
Arizona	6
Delaware	1
Idaho	2
Illinois	8
Louisiana	6
Minnesota	5
Montana	1
New Mexico	1
Pennsylvania	5
Wisconsin	3
Vincent's angina:	
Illinois	15
Maryland	14
Montana	4
Whooping cough:	
Arizona	59
Delaware	15
Idaho	6
Illinois	455
Louisiana	20
Maryland	218
Minnesota	191
Montana	51
New Mexico	53
Pennsylvania	1,118
Puerto Rico	135
Rhode Island	142
Wisconsin	752

WEEKLY REPORTS FROM CITIES

City reports for week ended Oct. 14, 1933

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland	0	-----	0	0	2	1	0	0	0	3	26
New Hampshire:											
Concord	0	-----	0	0	0	0	0	0	0	0	6
Manchester	0	-----	0	0	0	0	0	0	0	0	9
Nashua	0	-----	0	0	0	1	0	0	0	0	-----
Vermont:											
Barre	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Burlington	0	-----	0	0	0	0	0	0	0	3	11
Massachusetts:											
Boston	5	-----	1	6	15	21	0	11	0	36	187
Fall River	0	-----	0	0	0	0	0	1	0	4	24
Springfield	0	-----	0	2	2	1	0	1	0	9	32
Worcester	2	2	0	50	5	4	0	1	1	5	48
Rhode Island:											
Pawtucket	1	-----	0	0	2	3	0	0	0	0	9
Providence	0	-----	0	0	1	4	0	2	1	15	48
Connecticut:											
Bridgeport	0	-----	0	1	3	2	0	1	1	0	30
Hartford	3	-----	0	0	6	0	0	0	2	0	50
New Haven	0	1	0	0	4	1	0	1	0	4	33

City reports for week ended Oct. 14, 1933—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
New York:											
Buffalo	2		0	0	16	19	0	5	0	17	113
New York	30	13	5	5	88	50	0	84	15	113	1,274
Rochester	5		0	0	3	5	0	4	0	4	62
Syracuse	0		0	0	3	0	0	2	0	14	32
New Jersey:											
Camden	0		0	0	2	4	0	2	0	0	28
Newark	0	5	0	0	3	3	0	2	0	44	83
Trenton	0		0	0	3	4	0	2	0	10	23
Pennsylvania:											
Philadelphia	6	5	2	3	14	40	0	28	3	9	418
Pittsburgh	2	2	3	3	18	22	0	8	0	22	131
Reading	0		0	0	0	1	0	0	0	5	10
Ohio:											
Cincinnati	5		1	2	6	27	0	8	0	4	101
Cleveland	10	37	1	0	6	48	0	11	1	33	150
Columbus	0		0	1	3	19	0	4	0	0	70
Toledo	1		0	0	5	22	0	2	0	4	65
Indiana:											
Fort Wayne	3		0	0	0	4	0	1	0	0	20
Indianapolis	5		0	0	7	9	0	3	1	7	
South Bend	0		0	0	0	7	0	0	0	0	14
Terre Haute	0		1	1	1	0	0	0	0	0	20
Illinois:											
Chicago	1	3	1	4	29	71	0	33	5	43	570
Springfield	1		0	0	0	4	0	1	0	0	19
Michigan:											
Detroit	17	4	2	1	11	36	0	15	1	54	227
Flint	1		0	0	3	11	0	0	0	0	26
Grand Rapids	1		0	1	0	3	0	1	0	3	22
Wisconsin:											
Kenosha	0		0	0	0	7	0	0	0	5	
Madison	[1] 2			1		0	0	1	0	11	22
Milwaukee	2	1	1	0	5	9	0	3	0	46	96
Racine	0		0	0	2	5	0	1	0	2	9
Superior											
Minnesota:											
Duluth	0		1	0	1	6	0	3	1	2	22
Minneapolis	6		0	1	5	13	0	0	1	12	97
St. Paul	1	1	1	0	2	13	0	2	1	3	59
Iowa:											
Des Moines	2			0		27	0		0	0	25
Sioux City	0			0		0	0		0	5	
Waterloo	0			0		0	0		0	0	
Missouri:											
Kansas City	9		0	1	6	17	0	6	0	2	108
St. Joseph	1		0	0	3	3	0	0	0	0	10
St. Louis	17		1	2	8	11	0	7	0	7	174
North Dakota:											
Fargo	0		0	0	2	0	0	0	1	0	7
South Dakota:											
Aberdeen	0		0	0	0	0	0	0	0	0	
Nebraska:											
Omaha	1		0	3	2	4	0	3	0	1	44
Kansas:											
Topeka	0		0	0	0	3	0	0	0	0	20
Wichita	1		0	0	0	0	0	0	0	3	24
Delaware:											
Wilmington	0		0	0	4	3	0	0	0	1	27
Maryland:											
Baltimore	1		0	1	8	16	0	10	3	31	180
Cumberland	2		0	2	0	2	0	1	1	0	16
Frederick	0		0	0	0	1	0	0	0	0	2
District of Columbia:											
Washington	7	1	1	1	8	14	0	11	4	7	117
Virginia:											
Lynchburg	4		0	0	0	2	0	0	0	3	11
Richmond	4		0	0	2	3	0	2	1	0	37
Roanoke	11		0	0	0	9	0	0	1	0	13
West Virginia:											
Charleston	2		0	0	[1] 1	2	0	2	1	0	20
Huntington	5		0	0	0	11	0	0	0	0	
Wheeling	0		0	0	3	5	0	1	2	3	19

[1] Imported.

City reports for week ended Oct. 14, 1933—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
North Carolina:											
Raleigh	0	------	0	0	0	4	0	1	1	0	11
Wilmington	3	------	0	0	0	1	0	0	0	0	13
Winston-Salem	7	------	0	0	2	12	0	2	1	0	14
South Carolina:											
Charleston	0	11	0	0	0	2	0	0	0	0	18
Columbia	0	------	0	0	4	0	0	0	0	0	8
Greenville	1	------	0	0	0	0	0	0	0	2	6
Georgia:											
Atlanta	10	9	3	1	2	1	0	4	0	0	77
Brunswick	0	------	0	0	0	0	0	1	0	0	4
Savannah	1	------	0	0	1	1	0	2	0	0	37
Florida:											
Miami	0	------	0	0	0	0	0	4	1	2	20
Tampa	1	------	0	0	1	2	0	0	1	3	30
Kentucky:											
Ashland	4	------	0	0	0	5	0	0	0	10	------
Lexington	4	3	0	0	0	4	0	1	1	1	14
Louisville	11	------	0	1	5	14	0	1	0	3	81
Tennessee:											
Memphis	6	------	1	0	8	6	0	4	1	0	87
Nashville	3	------	0	0	2	11	0	2	0	1	53
Alabama:											
Birmingham	8	5	1	1	5	6	0	3	6	1	64
Mobile	1	------	0	1	1	1	0	0	0	0	24
Montgomery	1	------	------	0	------	2	0	------	1	0	------
Arkansas:											
Fort Smith	3	------	------	0	------	1	0	------	0	1	------
Little Rock	0	------	0	0	0	3	0	3	0	0	4
Louisiana:											
New Orleans	4	1	1	0	6	3	0	13	5	1	------
Shreveport	12	------	0	0	3	3	0	3	0	0	37
Oklahoma:											
Tulsa	2	------	------	2	------	4	0	------	0	1	------
Texas:											
Dallas	20	------	0	0	0	3	1	5	1	------	62
Fort Worth	6	------	0	0	4	7	0	6	0	0	34
Galveston	1	------	0	0	0	1	0	0	1	0	10
Houston	23	------	0	0	2	2	0	1	0	0	48
San Antonio	2	------	1	0	4	0	0	5	0	0	56
Montana:											
Billings	0	------	0	0	0	1	0	0	0	0	4
Great Falls	0	------	0	0	0	0	0	0	0	1	6
Helena	0	------	0	1	0	0	0	0	0	0	4
Missoula	0	------	0	0	0	1	0	0	1	0	1
Idaho:											
Boise	0	------	0	0	1	0	1	0	0	0	11
Colorado:											
Denver	1	16	1	0	2	7	0	4	0	18	87
Pueblo	0	------	0	0	1	1	0	0	0	5	7
New Mexico:											
Albuquerque	0	------	0	0	0	2	0	1	1	0	10
Utah:											
Salt Lake City	0	------	0	5	1	5	0	3	1	2	25
Nevada:											
Reno	0	------	0	0	0	0	0	0	0	0	3
Washington:											
Seattle	0	------	2	0	4	2	0	2	0	6	69
Spokane	0	1	1	4	2	3	0	0	0	0	30
Tacoma	0	------	0	0	5	0	0	1	0	0	31
Oregon:											
Portland	0	------	2	0	2	15	0	0	0	0	62
Salem	0	------	0	0	0	0	0	0	0	0	0
California:											
Los Angeles	11	23	1	4	5	40	1	16	0	37	245
Sacramento	0	------	0	1	1	4	0	3	[1] 1	1	19
San Francisco	1	2	0	0	4	6	0	9	0	17	151

[1] Imported.

City reports for week ended Oct. 14, 1933—Continued

State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths	
Maine:			
Portland	0	0	1
Massachusetts:			
Boston	0	0	2
New York:			
Buffalo	0	0	1
New York	1	1	13
Syracuse	0	0	1
New Jersey:			
Newark	0	0	6
Pennsylvania:			
Philadelphia	1	0	0
Pittsburgh	1	0	0
Ohio:			
Cincinnati	0	1	0
Cleveland	0	0	3
Indiana:			
Indianapolis	2	2	0
Illinois:			
Chicago	2	0	5
Michigan:			
Detroit	1	0	3
Wisconsin:			
Milwaukee	0	0	1
Minnesota:			
Duluth	0	0	1
Minneapolis	0	0	8
Maryland:			
Baltimore	0	1	0
Virginia:			
Richmond	0	1	0
Georgia:			
Atlanta	1	0	2
Tennessee:			
Memphis	1	0	0
Nashville	0	0	1
Colorado:			
Denver	0	0	1
Washington:			
Seattle	1	0	2
California:			
Los Angeles	2	0	2

Lethargic encephalitis.—Cases: New York, 3; Pittsburgh, 1; Cleveland, 1; Springfield, Ill., 1; Detroit, 1; Kansas City, Mo., 2; St. Joseph, Mo., 3; St. Louis, 15; Topeka, 2; Wichita, Kans., 2; Louisville, 1; Birmingham, 1; Houston, Tex., 2.

Pellagra.—Cases: Raleigh, 1; Charleston, S.C., 1; Savannah, 1; Birmingham, 1; Montgomery, Ala., 1 Los Angeles, 1.

Typhus fever.—Cases: Atlanta, 4; Savannah, 2; Mobile, 1; San Antonio, 1.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Two weeks ended October 7, 1933.—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases for the 2 weeks ended October 7, 1933, as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chicken pox		7		48	108	33	22	8	27	253
Diphtheria		2	4	39	14	24	10	1		94
Dysentery					4					4
Erysipelas				4			1	2	4	11
Influenza		10	1	1	8	8			9	37
Lethargic encephalitis					1	2				3
Measles			2	68	10	2		1	21	104
Mumps					24		8		46	78
Paratyphoid fever					9				1	10
Pneumonia					13		4		13	30
Poliomyelitis				10	4	1	1	1		17
Scarlet fever	1	7	13	107	105	38	10	4	48	333
Trachoma									4	4
Tuberculosis		2	21	94	61	12	7	1	35	233
Typhoid fever			23	115	25	11	14	3		191
Undulant fever				1	10					11
Whooping cough		6	6	166	178	54	27	6	29	472

Ontario Province—Communicable diseases—Five weeks ended September 30, 1933.—The Department of Health of the Province of Ontario, Canada, reports certain communicable diseases for the 5 weeks ended September 30, 1933, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cerebrospinal meningitis	2		Pneumonia		89
Chicken pox	165		Poliomyelitis	7	
Diphtheria	35	2	Scarlet fever	161	1
Dysentery	28	3	Septic sore throat	4	
Erysipelas	3		Syphilis	202	2
German measles	6		Tetanus	1	1
Gonorrhea	237		Trachoma	19	
Influenza	23		Tuberculosis	259	48
Lethargic encephalitis	2	2	Tularaemia	3	
Measles	14		Typhoid fever	91	4
Mumps	85		Undulant fever	24	
Paratyphoid fever	23		Whooping cough	522	3

JAMAICA

Communicable diseases—4 weeks ended October 7, 1933.—During the 4 weeks ended October 7, 1933, cases of certain communicable dis-

eases were reported in Kingston, Jamaica, and in the island of Jamaica, outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Cerebrospinal meningitis	1	2	Leprosy		5
Chicken pox	2	10	Poliomyelitis		1
Diphtheria	1	1	Puerperal fever		2
Dysentery	6	8	Tuberculosis	17	71
Erysipelas		2	Typhoid fever	11	77

MEXICO

Monterrey—Malaria.—Under date of October 17, 1933, an outbreak of malaria was reported in Monterrey, Mexico, and nearby places. Floods were said to be responsible for the unusual prevalence of the disease.

POLAND

Vital statistics—1932.—The central office of statistics of Poland has published the following provisional vital statistics for 1932:

Number of marriages	270,277
Marriages per 1,000 inhabitants	8.3
Number of live births	932,116
Live births per 1,000 inhabitants	28.7
Total deaths	487,125
Deaths per 1,000 inhabitants	15.0
Infant deaths	133,351
Deaths of infants per 100 live births	14.3

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

(NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for Oct. 27, 1933, pp. 1328-39. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued Nov. 24, 1933, and thereafter, at least for the time being, in the issue published on the last Friday of each month.)

Cholera

India—Chittagong.—During the week ended October 14, 1933, 1 case of cholera with 1 death was reported in Chittagong, India.

Philippine Islands.—During the week ended October 21, 1933, cholera was reported in the Philippine Islands as follows: Antique Province, Dao, 9 cases, 6 deaths. Bohol Province, Inabanga, 6 cases, 3 deaths. Cebu Province, Carcar, 3 cases, 2 deaths; Cebu city, 3 cases, 1 death; Talisay, 1 case, 1 death; Toledo, 8 cases, 5 deaths.

Typhus Fever

Chile.—A report dated October 11, 1933, states that since January 1, 1933, nearly 5,500 cases of typhus fever had occurred in Chile, of which it is estimated about 90 percent appeared in Santiago.

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