

PUBLIC HEALTH REPORTS

VOL. 49

SEPTEMBER 7, 1934

NO. 36

DERMATITIS IN A NUT AND BOLT PLANT DUE TO USE OF FRICTION TAPE

By LOUIS SCHWARTZ, *Senior Surgeon, United States Public Health Service*, and R. P. ALBAUGH, M.D., *Republic Steel Corporation, Cleveland, Ohio*

In the operation of a manufacturing company where nuts and bolts are made, cases of dermatitis have occurred in unusual numbers for the past 2 years. An examination of the records shows that from August 1933 up to March 1934, 31 cases of dermatitis of the fingers and hands have occurred among an average number of 150 employees engaged in screwing nuts on bolts ("nutting"). This operation is performed mostly by women and is done entirely by hand in the case of large bolts and nuts, and by the use of a spinning device, on which the nut is placed, in the case of shorter bolts and nuts.

There is considerable friction and trauma of the hands and fingers in performing this operation; and in order to protect the skin, the workers wrap their fingers in friction tape. The amount of friction is so great that a wrapping of friction tape wears through in a few hours, so that it is necessary to change the wrapping at least once a day, that is, after the morning work, and sometimes more often.

A physician in charge of the medical service in the plant suspected the friction tape as being the cause of the dermatitis and furnished the workers with gauze bandages to wrap around the fingers over which the friction tape was wound, with the idea of keeping the friction tape from coming in contact with the skin. While this helped to lessen the number of cases of dermatitis occurring, it did not stop them, as new cases continued to occur.

PROCESS

The chief processes in the making of bolts and nuts are as follows:

Steel wire is "pickled" in a sulphuric acid solution in order to remove the scale. It is then dipped in a vat of water to wash off the excess acid and placed in a vat of hot lime solution, after which it is allowed to dry. A thin coat of lime remains on the wire. This aids in cold drawing the wire to suitable size. Formerly a thick coat of lime was given to the wire, but it was found that dermatitis developed on the hands of the wire drawers, because the slushing solution used on the machines wet their hands, and when they handled the lime-

coated wire with their moist hands, a dermatitis resulted. Since a thin coating of lime has been put on, this trouble has ceased.

The lime-coated wire is drawn to proper size through a die, but before it goes through the die it is passed through a lime mixture. This is done in order to facilitate the drawing, the coating acting as a lubricant. The drawn wire is then placed in bolt making machines, which cut them to proper size and put heads on them. The bolts are then threaded on machines, each bolt being done separately. Women are employed in this operation. The threading dies of the machines doing this work are continuously bathed in a slushing oil, but the girls performing this operation have had no dermatitis.

After the bolts have been threaded they are placed in a washing machine which has two compartments. In the first compartment there is a solution of tri-sodium phosphate, which removes the slushing oil; and in the second compartment the bolts are immersed in a preserving oil.

In the manufacture of nuts, steel bars are fed into automatic machines which stamp out the blank unit. After several finishing operations they are threaded and then ready for assembly.

After the bolts have been threaded and washed, they are taken to another room where the girls put nuts on them, as described above. The superintendent states that up to 20 years ago, when boys were employed in this operation, there was nothing worn to protect the fingers; and as a result, the skin of new workers became red and inflamed and remained in that condition for a week or two, and then finally became toughened and calloused. Since women have been employed at this operation it has been the custom to wrap the fingers with tape to protect them from friction, but dermatitis has resulted from the wearing of friction tape during the past 2 years only.

POSSIBLE IRRITANTS TO WHICH THE WORKERS ARE EXPOSED

The lime used on the wire before it is drawn has completely disappeared by the time the bolt stage is reached. The slushing solution used on the machines consists of a naphthenic base oil which is sulphonated with oleum, to which potash is added to neutralize it, and a small percentage of alcohol. The base oil is bought by the plant, and in the plant it is mixed with a paraffin base oil having a viscosity of 100, and an SAE rating of 10, in proportion of 4 parts of the base to one of the paraffin base oil. This mixture is diluted with 10 parts of water and a very small amount of pine oil is added to give it a pleasant odor. It is stored in a large tank from which it is siphoned to all parts of the plant for use in cutting and punching tools.

The finish wash on the bolts after they come from the tri-sodium phosphate bath consists of this slushing oil. Some of the bolts are

washed free of oil in a 2 percent solution of soda ash and then dried. The finish wash for the nuts consists of a 90 percent solution of synthetic turpentine mixed with 10 per cent of anhydrous lanolin.

A black oil is used on some products. This black oil consists of a naphthenic base of 100 percent viscosity, to which sulphur monochloride has been added, and further treated so that it loses its irritant properties.

So far as the oils are concerned, the workers doing "nutting" come only in contact with the slushing oil that is left on the bolts and with the antirust solution consisting of 90 percent of turpentine and 10 percent of anhydrous lanolin that remains on the nuts.

PATCH TESTS

The manufacturers of the friction tape furnished the method of manufacture and the ingredients used. The materials used in making it are smoked sheet rubber, three varieties of reclaimed rubber, mineral rubber, asphalt, and barytes.

Sixteen of the thirty-one cases that had occurred between August 1933 and March 1934 were available for patch testing. Only one of these was still suffering with dermatitis; the others had either remained away from work and recovered or had been treated and recovered, or had been transferred to another department. The 16 workers were examined for skin conditions (see table). It will be noted that 9 of them had dermatophytosis of the feet, and some of them gave a history of having blisters on the hands in hot weather.

They were all patched with 10 patches, as follows:

Patch 1: Asphalt used in the friction tape.

Patch 2: A mixture of slushing oil used on the bolts with some trisodium phosphate which is used to wash off the machine oil.

Patch 3: Reclaimed rubber no. 116.

Patch 4: Reclaimed rubber no. 730.

Patch 5: Reclaimed rubber no. 102.

Patch 6: Mineral rubber.

Patch 7: Smoked sheet rubber.

Patch 8: Barytes.

Patch 9: Friction tape.

Patch 10: Friction tape moistened with the slushing oil and trisodium phosphate mixture. This patch was put on because it was found that the oil on the bolts and nuts wet the outside of the friction tape and seeped through it and the gauze bandage and wet the skin.

Table showing results of patch tests

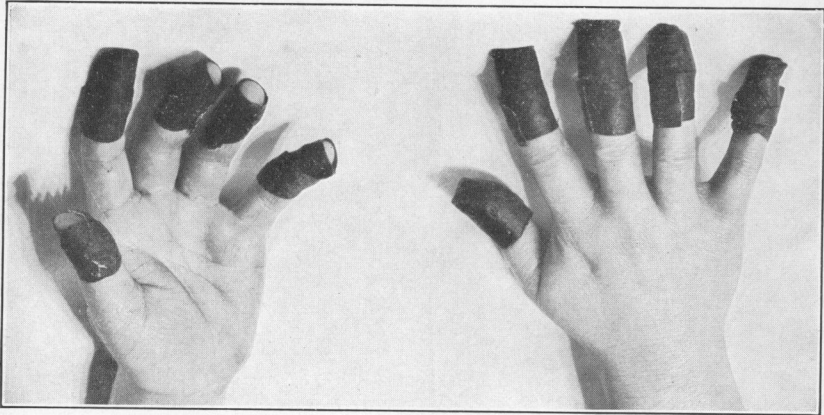
Number	Subject	Absence from work on account of dermatitis	History of presence of dermatophytosis	No. 1.—Asphalt	No. 2.—Mixture stannous oil and tri-sodium phosphate	No. 3.—Reclaimed no. 116	No. 4.—Reclaimed no. 730	No. 5.—Reclaimed no. 103	No. 6.—Mineral rubber	No. 7.—Smoked sheet rubber	No. 8.—Barytes	No. 9.—Friction tape	No. 10.—Friction tape moistened with stannous oil and tri-sodium phosphate	Remarks
11	HS	None	Yes	+	-	+	+	+	(?)	(?)	-	+	+	Sensitive to adhesive plaster.
21	AA	do	Yes	+	-	-	-	-	-	-	-	-	-	
31	AM	None	Yes	+	+	+	+	+	+	+	+	+	+	Blisters in hot weather.
41	GP	None	No	-	-	-	-	-	-	-	-	-	-	
51	GG	None	No	-	-	-	-	-	-	-	-	-	-	
61	CM	None	Yes	(?)	(?)	(?)	+	+	(?)	+	+	+	+	Sensitive to adhesive plaster. Tinea versicolor back—groin.
71	JC	None	No	+	-	-	+	-	+	-	-	+	+	Sensitive to adhesive plaster.
81	HK	13 days	Yes	+	-	-	+	-	+	+	+	+	+	Do.
91	MH	None	No	+	-	-	+	-	+	+	+	+	+	Do.
101	MC	None	Yes	+	-	+	+	+	+	+	+	+	+	Do.
111	GB	17 days	Yes	+	-	+	+	-	-	+	-	+	+	Small blisters on fingers in summer.
121	AS	23 days	Yes	+	-	-	+	-	+	-	-	+	+	
131	SM	39 days	No	+	+	+	+	+	+	+	+	+	+	Sensitive to adhesive plaster.
141	MT		No	+	-	-	+	+	+	+	+	+	+	
151	AL	None	No	+	-	+	+	+	+	+	+	+	+	
161	JM	None	Yes	+	-	-	+	+	+	+	+	+	+	

¹ Patch left on 72 hours and site inspected.

² Site of patch inspected 72 hours after removal of patch.

In order to find out whether the dermatitis was peculiar to this plant or whether it occurred in other similar plants, another factory in which bolts and nuts were manufactured was visited and the "nutters" were examined. It was found that dermatitis was prevalent among these workers just as it was in the first factory. It was also found that the "nutters" used friction tape for protecting the fingers similar to that used in the first factory. From this it was concluded that dermatitis occurred in other plants where "nutting" was performed and friction tape was used to protect the fingers.

The patches were left on for 72 hours and the reactions read. Seventy-two hours later they were again inspected for late reactions. The chart gives the results of the patch tests. Thirteen showed reactions to friction tape. Twelve showed reactions to the friction tape mixed with the oil. The same 13 that showed reactions to the friction tape showed reactions to the reclaimed rubber no. 730.



METHOD OF TAPING FINGERS THAT CAUSED DERMATITIS.



REACTION TO PATCH OF FRICTION TAPE.

Twelve showed reactions to asphalt, 8 to mineral rubber, 6 to smoked sheet rubber, and 5 each to reclaimed rubber no. 102 and no. 116. There were 3 late reactions to barytes, and there was 1 reaction to the mixture of oil and tri-sodium phosphate. Eight of the cases showed hypersensitivity to the adhesive plaster with which the patches were sealed. Two cases that showed no reactions had no history or sign of dermatophytosis. The third had a few scales between the fourth and fifth toes, but no other signs on the body. Of the 13 who showed reactions to the tape, 8 had some signs of dermatophytosis.

DISCUSSION

It seems from these tests that the friction tape was the active cause of the dermatitis. Only one case was sensitive to the oil and tri-sodium phosphate mixture. The reactions of the tape wet with the oil and tri-sodium phosphate mixture were less in degree than those to the friction tape alone, except in one case.

Reclaimed rubber no. 730, a soft sticky rubber, gave the most reactions. Everyone showing sensitivity to the friction tape showed sensitivity to this reclaimed rubber.

When the gauze was wound around the fingers and the friction tape wound around the gauze, the slushing fluid and oil remaining on the bolts and nuts seeped through the friction tape, carrying with it whatever ingredients it dissolved out, and soaked the bandage around the fingers, thus exposing them to the irritants in the friction tape. The patch tests showed that this was sufficient to cause dermatitis on the intact skin, even without the friction that must occur because of the nature of the work performed. In addition to this, many of the workers had small blisters on the sides of the fingers as a result of dermatophytosis, and the action of the irritants in the friction tape must have been even more marked on these open vesicles.

The question arose whether to discontinue the use of friction tape and use ordinary adhesive tape. The results of the patch tests showed that 50 percent of those examined showed hypersensitivity to the adhesive plaster. Therefore, it was thought that such a plaster would be very little better, if any, than the friction tape used.

Since contact with the friction tape was the cause of the dermatitis, it was thought that if an impervious material, such as a thin rubber finger cot, or one made of cellophane, be interposed between the gauze and the friction tape, it would be impossible for any of these irritants to touch the skin. The gauze next to the finger would act as an absorbent for the natural perspiration of the skin and prevent the maceration that might occur if the rubber or cellophane were next to the skin. Such a recommendation was made and the management chose cellophane because of its cheapness and blandness. Tubes of cellophane of sufficient diameter to fit over the gauze-wrapped

finger were purchased and supplied to the "nutters", and no new cases of dermatitis developed among them.

SUMMARY

An outbreak of dermatitis among "nutters" in a nut and bolt factory was investigated.

The dermatitis was due to friction tape used on the fingers to protect them from trauma.

Most of the ingredients in the friction tape were found to be irritating.

The most irritating ingredient was a reclaimed rubber.

Friction tape had been used for approximately 20 years and had not been followed by dermatitis until the past 2 years, suggesting that more irritating ingredients are being used now than formerly.

Examinations made in a similar plant showed that the occurrence of dermatitis among "nutters" wearing friction tape was not restricted to the plant examined.

It was recommended that a material impervious to water and oil be worn between a gauze wrapping on the finger and the friction tape, in order to prevent contact of the irritants with the skin. No new cases developed after the adoption of this method.

CHILD HEALTH ACTIVITIES IN A STATE DEPARTMENT OF HEALTH¹

By ESTELLA FORD WARNER, *Surgeon, United States Public Health Service*

In almost every article or book wherein public health administration or function is discussed, one finds such statements as "rural health service is undergoing rapid evolution", "administrative practices have developed rapidly in the last decade", "public health activities have increased in scope, volume, and effectiveness", "the protection of the health of mothers and young children is perhaps the most important of all the functions of the health department", and "activities in this field [child hygiene] have already achieved promising results". One would scarcely gainsay any of these assertions. However, one wonders whether the frequent repetition of these words has not produced a somewhat bromidic effect upon health workers which prevents querying the direction of "the evolution of rural health service," the soundness of the "administrative practices" which have developed so rapidly during the decade, the real "effectiveness of public health activities", and, in the field of child hygiene, the actuality of achievements which seemed so promising. This brief discussion, therefore,

¹ Presented at the 32d Annual Conference of State and Territorial Health Officers with the United States Public Health Service, Washington, D.C., June 7, 1934.

is intended merely to consider some of the present problems in the maternal and child health field as related to the usually accepted program in child hygiene activities.

The history underlying the development of child hygiene as a part of a public health program clarifies considerably our present situation in maternal and child hygiene services. I need scarcely remind this audience of the details of that history. Suffice it to say, that when State departments of health assumed the responsibility for the development and performance of functions in child hygiene, there were no program patterns to follow. Consequently, plans designed for and executed by urban organizations largely on the basis of "specialized" services were taken in part or in full and, with minor adaptations, spread over a whole State and presented as the program for county health departments or the lone county nurse, each attempting to carry on a "generalized" service in a given area. Likewise, the measuring rods to determine effectiveness of such activities were carried over from the urban to the State or rural services, and evidences of comparable accomplishment were hopefully sought. The end result was not wholly satisfactory; but the surprising thing is that achievement was as great as has been repeatedly demonstrated.

Maternal hygiene has occupied a conspicuous place in the child hygiene program. Education was the keynote—education directed toward reducing unnecessary maternal deaths. Tremendous effort was put forth in an attempt to fulfill these functions, with perennial disappointment as we hopefully watched for improvement in the maternal mortality rates for a State or the Nation as a whole. However, such reports as that submitted by Williamson County, Tenn.,² give evidence that all effort is not in vain. After 6 years' work the report states that, in 1932, 74 percent of the prenatal cases were under supervision—an increase from 11 percent in 1927. Maternal death rates decreased from 7.4 per 1,000 births in 1927 to 2.2 in 1932. The average death rate for the 6 years among mothers not under supervision in Williamson County was 6.6 times higher than that of those under supervision. The reports of Rutherford County, Tenn.,³ Marion County, Oreg.,⁴ and Clarke County, Ga.,⁵ show, respectively, 22 percent, 17 percent, and 22 percent of all cases under prenatal supervision and the death rates over a 5-year period to be 3½, 2, and 1½ times greater among the mothers not under prenatal supervision than among those receiving care. In each instance, also, there was a material decline in the total maternal mortality rate for each county. The association between prenatal hygiene and decline in death rates

¹ An outline of the maternal hygiene program and the results of 6 years' work in Williamson County, Tenn. *Southern Medical Journal*, September 1933.

² Cross sections of rural health progress. By H. S. Mustard, M.D. Commonwealth Fund, New York City.

³ Children of the covered wagon. By Warner and Smith. Commonwealth Fund, New York City.

⁴ A chapter in child health. Commonwealth Fund, New York City.

seems significant. By way of contrast, probably the best report is that made of a survey of rural health service in 29 counties,⁶ wherein it is shown that 10 percent of the maternity cases were rendered prenatal supervision by the health departments. The intensity of that average type of service is probably not sufficiently great materially to influence mortality rates.

Two recent reports throw still more light upon possible reasons why our general maternal hygiene program seems not to effect greater results. As I stated previously, the public health program for maternal care is based upon teaching mothers the need and value of continuous and proper medical service throughout maternity. It has fallen to the lot of the public health nurse to carry the major part of that load. The "Survey of public health nursing",⁷ recently published by The National Organization for Public Health Nursing, in which 28 communities, both urban and rural, were studied, brings forth the fact that in performance (which means quality of work) of nursing services prenatal care rates the highest of all types of service. The study further analyzes the prenatal home visit and scores the quality of the visit, using four criteria, namely, approach (implying "the intangible qualities of relationship with people which make for a good or poor contact"), technique, teaching, and the adequacy of care. Of these four criteria, approach counts highest, technique second, adequacy of care third, and teaching (the basis of the public health program) last. Insofar as a State program of child hygiene is concerned, if the content is to be educational in character, with this study showing that the nurse is least able to render good performance in the teaching, it would seem necessary to include in that program better supervision of activities and some plan for staff education. Both of these needs are conspicuously lacking in many State departments of health. The form that these services should take is not so important as is the need that the standards of service be established and maintained.

The other report which supplies useful information for maternal hygiene programs is that submitted by the New York Academy of Medicine on "Maternal Mortality in New York City."⁸ Of all the maternal deaths occurring in New York City during a 3-year period, the report claims that two-thirds were due to preventable causes. Those causes were puerperal septicemia, abortions, and toxemias of pregnancy. Of these deaths, responsibility is placed upon the physician in 61 percent of the cases, on the midwife in 2 percent, and upon the patient in 37 percent. How much influence, then, can a State health department program in maternal and child hygiene have upon reducing these deaths? If 61 percent are due to faulty judgment or lack of skill on the part of the attendant, the usual public health

⁶ Rural public health service. By A. W. Freeman, M.D. Commonwealth Fund, New York City.

⁷ A survey of public health nursing. The Commonwealth Fund, New York City, 1934.

⁸ Maternal mortality in New York City. Commonwealth Fund, New York City.

program is not very definitely directed to overcome that defect. Fortunately, an increasing number of States are either initiating or cooperating in activities designed to bring modern and proper obstetrical care and techniques to local physicians. There is vast room for further extension in that type of enterprise and the need of health departments' interesting themselves in the quality of medical service rendered in any given community.

The deaths ascribed to patient responsibility (37 percent of the total) were due to abortions, pernicious vomiting, toxemias, and phlegmasia alba dolens. Fifty-nine percent of this group failed to obtain suitable care, and 41 percent evidenced a lack of cooperation in following through care and treatment. To continue teaching the need of prenatal care to the patient is apparent; but teaching emphasis upon the standards of both prenatal and obstetrical care to the whole family and the community are likewise necessities. The report shows that the death rates are about equal in the economic group on the lowest poverty level and in the one which is able to pay for the service of the doctor at delivery, but not for prenatal or adequate postnatal care. Therefore, facilities for rendering service become community problems. A low maternal death rate in a given community is no reason for curtailing efforts in the maternal hygiene field until there is certain evidence that it is the lowest rate that can be obtained—and that point is now a distant one in each community.

Marked progress has been made in the reduction in infant death rates. We all recognize where those reductions have taken place, namely, in the age group from one to twelve months. The problem of neonatal mortality remains practically unchanged. It is so tightly bound with that of maternal care that there is little hope of improvement until better prenatal and obstetrical services can be secured. The largest single contributing factor to the decrease in infant deaths during the last 15 years has been the decline in deaths due to diarrhea and enteritis. Much as we who are interested in child hygiene would like to claim all honor for that notable reduction, credit must fall where credit is due, and the sanitary engineer must have his share for effecting improved water and milk supplies. However, there can be no doubt that the effort that has been expended in teaching mothers concerning the care and feeding of their babies has contributed definitely toward preventing untold numbers of unnecessary deaths among infants.

Communicable disease remains one of the major problems in the child health field. Research will ultimately give us more adequate means of prevention and control; but, meanwhile, further gains can be achieved in those diseases for which we have a known means of prevention. Each year, for the past several years, diphtheria cases and deaths have attained lower levels in the United States as a whole.

But in 1932, 18 States had diphtheria death rates in excess of the rate for the United States registration area, and 12 of those States evidenced a rise in rates over the previous 2 years. A recent report from the Virginia State Department of Health ⁹ states that 41 percent of the school children have been immunized. There were last year 148 diphtheria deaths in the State. By dividing the counties according to the percentage of school children immunized, it was found that in the group of counties in which 75 percent received toxoid or toxin-antitoxin there were 20 deaths; in the second group, with 43 percent immunized, 49 deaths occurred; while in the third group, with only 10 percent immunized, there were 79 diphtheria deaths. The reverse ratio of immunization to deaths is significant. We know that about 65 percent of all diphtheria deaths are among children under school age, and from the White House Conference report we are aware that but 21 percent of the preschool children in urban areas and 18 percent of those in rural districts have had treatment for protection against diphtheria.

Undernourishment and correction of defects remain problems of school hygiene in most States. The study of public health nursing ¹⁰ rates school nursing as the last service in relation to quality of work, whether that service be directed by the health department or board of education. The weakest factors in performance of this service are technique and teaching—two fundamentals for good public health service.

SUMMARY

Some of the needs most apparent in the child hygiene field are improved teaching techniques for nurses in prenatal care and physicians qualified to render better judgment and skill in obstetrical care so that preventable losses in maternal and neonatal lives might be reduced, and improved morbidity rates be realized. The immunization of the infant and preschool child is still a paramount problem, likewise the health supervision of children of all ages to assure better nutrition and correction of defects. It is obvious that in each of these situations the problem is not one that concerns the mother, the baby, or the child alone. Nor is improvement in any one of these conditions brought about by a single type of service rendered. The nurse may be the chief agent in carrying out the functions of a so-called "child hygiene program" in a local health department, but behind her are the sanitary engineer, the epidemiologist, and the health officer; and behind this group of public health workers are the medical profession and the community. There is no distinct line of cleavage between child hygiene, other public health activities, medical service, or com-

⁹ Deaths from diphtheria directly proportional to percentage of immunization. By B. B. Bagby, M.D., Virginia Medical Monthly, May 1934.

¹⁰ See footnote 7.

munity welfare; they must be integrated into a pattern in which each plays its part. Child hygiene is not an entity; it should be closely bound with the activities of rural health services. Therefore, a program of a State health department ought to render the leadership, consultation, advice, method, and technique for sound performance in maternal and child health as a part of a whole community program, so that in the last analysis achievement in health improvement for all members of the family might be real and not merely desired.

COURT DECISION ON PUBLIC HEALTH

Injunctive relief granted against maintenance of nuisance by cork manufacturing plant.—(New Jersey Court of Chancery; *Board of Health of Lyndhurst Township v. United Cork Companies*, 172 A. 347; decided April 26, 1934.) A statute of New Jersey provided as follows:

That any such local board of health, instead of proceeding in a summary way to abate a nuisance hazardous to the public health, may file a bill in the court of chancery, in the name of the State, on the relation of such board of health, for an injunction to prohibit the continuance of such nuisance, and such actions shall proceed in the court of chancery according to the rules and practice in such cases on the relation of individuals, [etc.].

Proceeding under this law, the State, on the relation of the Board of Health of Lyndhurst Township, filed a bill for an injunction to prohibit the defendant corporation, which was engaged in manufacturing cork flooring and other products of which cork was a principal ingredient or component part, from maintaining and continuing what was claimed to be a public nuisance hazardous to the public health. The gravamen of the complaint was that the defendant permitted deleterious cork dust, fumes, odors, and gases to escape from its plant, which dust, etc., polluted the atmosphere to such a degree as to render it hazardous to the health of those residing within the contaminated area.

Upon a consideration of all the evidence the court concluded that the matters complained of were hazardous to the public health and that the relator was entitled to injunctive relief in accordance with its bill. The points decided by the court were:

(a) It was no answer to relator's evidence clearly establishing the existence of the public health hazard that some of defendant's employees and other of its witnesses testified that they were not annoyed or distressed by the odors, fumes, gases, or cork dust, as to hold otherwise would be to ignore the well-established rule that the charge of a nuisance predicated upon conditions offensive to persons in general cannot be successfully met or overcome by merely showing

that to some persons such things were not at all offensive or unpleasant.

(b) In the absence of proof that the complaining residents were fastidious or possessed of any idiosyncrasies rendering them more apt to be affected in the manner described by them, the presumption was that they were possessed of a normally conditioned body and mind.

(c) There was no legal merit to the contention that, since no one had been shown to have actually become afflicted with disease as a result of the public nuisance assailed, such nuisance was not hazardous to the public health and, therefore, neither cognizable nor enjoicable in the instant statutory proceeding. The court said that the fallacy of this contention was in the fact that it would make the operation of the statute dependent upon the existence of actual injury instead of mere hazard and went on to say that, whenever a hazard to the public health loomed up and was shown to exist, the mischief at which the statute was aimed had appeared and the application of the remedy therein prescribed was called for.

(d) The defendant could not escape from accountability for the public health hazard created and continued by the operation of its plant upon the claim that other industries in that locality added or contributed to the noxious conditions existing where the evidence was incontestable that, quite independent of any dust or odors emitted by other industries, it was the odors, fumes, and gases of burnt cork and the dust thereof—which unquestionably emanated from defendant's plant alone—that caused the distress complained of.

(e) The fact that the defendant had carried on its business in that locality for upward of 20 years was not ground for refusing the relief prayed for, as the rule was well settled that a right to maintain a nuisance, as against the public, could not be acquired by prescription.

(f) Neither the extent of defendant's represented investment nor the fact that some of those complaining had, after defendant's advent, voluntarily established their homes in that particular neighborhood excused the relator from a full performance of its statutory duty, nor should either of these facts deter the court, upon being fully satisfied of the existence of conditions shown to be hazardous to the public health, from lending its aid, when properly enlisted, to the health authorities in enabling them effectively to discharge their statutory duties to the public.

(g) A partial abatement of the nuisance by the defendant during the pendency of the suit did not defeat the right to complete relief.

DEATHS DURING WEEK ENDED AUG. 18, 1934

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

	Week ended Aug. 18, 1934	Correspond- ing week, 1933
Data from 86 large cities of the United States:		
Total deaths.....	7, 079	6, 479
Deaths per 1,000 population, annual basis.....	9.9	9.0
Deaths under 1 year of age.....	557	434
Deaths under 1 year of age per 1,000 estimated live births.....	52	137
Deaths per 1,000 population, annual basis, first 33 weeks of year.....	11.7	11.1
Data from industrial insurance companies:		
Policies in force.....	67, 567, 192	67, 700, 569
Number of death claims.....	11, 690	11, 220
Death claims per 1,000 policies in force, annual rate.....	9.0	8.6
Death claims per 1,000 policies, first 33 weeks of year, annual rate.....	10.3	10.1

¹ Data for 81 cities.

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 Aug. 25, 1934, and Aug. 26, 1933

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Aug. 25, 1934, and Aug. 26, 1933

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933
New England States:								
Maine.....	5			1	1		0	0
New Hampshire.....	1						0	0
Vermont.....					19	4	0	0
Massachusetts.....	12	15			18	28	1	1
Rhode Island.....					1	5	0	0
Connecticut.....	1	4	2		7	1	1	0
Middle Atlantic States:								
New York.....	20	23	18	13	62	45	4	10
New Jersey.....	14	10	10	1	22	15	1	0
Pennsylvania.....	20	27			156	57	6	3
East North Central States:								
Ohio.....	13	10	2		5	10	0	0
Indiana.....	15	13	11	55	5	5	0	0
Illinois.....	24	19	20	20	61	8	5	3
Michigan.....	3	24			9	8	0	0
Wisconsin.....	4	5	9	19	55	12	2	0
West North Central States:								
Minnesota.....	8	6			6	11	0	1
Iowa.....	1	4			9		2	0
Missouri.....	15	9	3	7	14	1	0	1
North Dakota.....	6	5			3	11	0	1
South Dakota.....	1				8	3	3	1
Nebraska.....	2	3			3	5	3	1
Kansas.....	13	6			4	10	3	0
South Atlantic States:								
Delaware.....							0	0
Maryland.....	4	7	146	5	3	2	0	0
District of Columbia.....	3	8				3	1	0
Virginia.....	22	27			17	15	0	1
West Virginia.....	14	26	17	25	29	15	1	1
North Carolina.....	41	41	1	4	31	13	1	1
South Carolina.....	4	25	81	83	4	34	0	0
Georgia.....	11	49				32	2	1
Florida.....	7	11		2	3	32	0	0

See footnotes at end of table.

*Cases of certain communicable diseases reported by telegraph by State health officers
for weeks ended Aug. 25, 1934, and Aug. 26, 1933—Continued*

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933
East South Central States:								
Kentucky.....	31	30		15	74		1	0
Tennessee ¹	10	14	13	19	24	20	2	1
Alabama ¹	33	47	6	11	75	11	1	0
Mississippi ¹	14	25					0	0
West South Central States:								
Arkansas.....	8	12	1	4		5	1	0
Louisiana ¹	12	20	5	5	10	6	0	2
Oklahoma ¹	3	26	1	9	2	11	0	0
Texas ¹	43	57	11	52	6	28	0	1
Mountain States:								
Montana.....	1		5	2	8	1	0	0
Idaho.....							0	0
Wyoming.....				1	1	1	0	0
Colorado.....	4	4			4		0	0
New Mexico.....	1	2	3		5	2	1	0
Arizona.....	1	2	4		2	11	0	0
Utah ¹	1	1			4	9	0	6
Pacific States:								
Washington.....		1			6	8	0	4
Oregon ¹	1	2	17	5	4	11	1	0
California.....	13	23	5	17	35	70	0	3
Total.....	460	643	381	366	815	575	39	35

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933
New England States:								
Maine.....	0	2	3	6	0	0	7	2
New Hampshire.....	0	1	1	1	0	0	1	1
Vermont.....	1	0	1	4	0	0	0	0
Massachusetts.....	4	35	46	70	0	0	3	7
Rhode Island.....	0	2	6	8	0	0	1	1
Connecticut.....	1	0	3	14	0	0	1	3
Middle Atlantic States:								
New York.....	12	133	101	73	0	0	30	40
New Jersey.....	2	17	20	19	0	0	7	5
Pennsylvania.....	8	29	91	108	0	0	26	41
East North Central States:								
Ohio.....	10	20	67	85	0	0	45	48
Indiana.....	1	2	22	31	1	0	38	23
Illinois.....	14	17	74	103	0	0	41	32
Michigan.....	9	8	49	62	1	0	16	40
Wisconsin.....	3	2	27	11	7	4	4	3
West North Central States:								
Minnesota.....	1	18	9	19	0	1	13	0
Iowa ¹	2	0	9	13	1	0	7	2
Missouri.....	1	2	17	8	0	0	52	20
North Dakota.....	1	5	5	7	0	0	2	0
South Dakota.....	1	0	3	2	0	0	1	2
Nebraska.....	2	2	11	16	0	0	10	0
Kansas.....	2	2	13	35	0	0	11	8
South Atlantic States:								
Delaware ¹	2	8	1	8	0	0	0	7
Maryland ^{1,2,4}	0	0	18	14	0	0	20	13
District of Columbia.....	1	0	7	4	0	0	0	3
Virginia.....	2	0	30	30	0	0	34	26
West Virginia.....	6	5	19	24	0	0	25	48
North Carolina.....	0	1	23	37	0	0	20	28
South Carolina ¹	0	1	4	3	0	1	19	32
Georgia ¹	1	0	7	15	0	0	52	40
Florida ¹	0	0	2	2	0	0	0	4

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Aug. 25, 1934, and Aug. 26, 1933—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933	Week ended Aug. 25 1934	Week ended Aug. 26 1933
East South Central States:								
Kentucky.....	9	0	9	39	0	0	72	100
Tennessee ¹	8	6	28	65	0	0	71	67
Alabama ⁴	5	0	14	24	0	0	52	25
Mississippi ²	1	0	5	5	0	0	18	9
West South Central States:								
Arkansas.....	0	0	1	4	0	0	5	28
Louisiana ⁴	1	2	6	12	0	0	36	26
Oklahoma ³	1	4	9	5	0	0	23	46
Texas ⁴	5	1	20	31	0	2	44	54
Mountain States:								
Montana.....	48	1	3	0	0	1	14	3
Idaho.....	8	0	—	4	0	0	2	0
Wyoming.....	1	0	5	2	0	0	0	0
Colorado.....	1	0	7	3	0	0	9	7
New Mexico.....	0	0	1	1	0	0	7	3
Arizona.....	7	0	8	4	0	0	5	2
Utah ¹	1	1	2	2	0	0	1	1
Pacific States:								
Washington.....	42	2	10	14	9	0	3	4
Oregon ²	1	0	10	4	0	2	5	6
California.....	63	3	58	48	0	5	16	9
Total.....	289	332	885	1,099	19	16	369	868

¹ New York City only.

² Week ended earlier than Saturday.

³ Rocky Mountain spotted fever, 4 cases as follows: Delaware, 1; Maryland, 1; Tennessee, 1; Oregon, 1.

⁴ Typhus fever, 53 cases as follows: Maryland, 2; South Carolina, 1; Georgia, 18; Florida, 1; Alabama, 4; Louisiana, 1; Texas, 26.

⁵ 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	Menin- gococ- cus menin- gitis	Diph- theria	Influa- enza	Ma- lar- ia	Mea- sles	Pel- lagra	Polio- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
<i>May 1934</i>										
South Dakota.....	4	21	6	—	1,150	—	2	28	11	1
<i>June 1934</i>										
South Dakota.....	1	6	—	—	384	—	1	14	0	1
<i>July 1934</i>										
Alabama.....	—	55	6	1,158	274	44	4	24	1	143
Georgia.....	—	16	40	519	61	65	3	13	—	247
Idaho.....	—	2	—	—	16	—	47	17	2	6
Kansas.....	5	37	4	6	152	—	15	55	2	76
Louisiana.....	1	43	20	425	116	9	1	24	0	95
Montana.....	—	6	8	1	31	—	15	11	1	9
New Hampshire.....	—	—	—	—	—	—	1	4	0	1
Oklahoma ¹	2	10	26	199	39	4	0	24	—	172
Oregon.....	1	4	48	—	46	—	6	74	4	18
South Dakota.....	1	2	—	—	148	—	7	4	3	3
Texas.....	3	170	181	2,989	573	98	23	137	28	363
Virginia.....	3	43	197	24	611	28	4	68	0	116

¹ Exclusive of Oklahoma City and Tulsa.

May 1934		July 1934		July 1934	
South Dakota:	Cases	Hookworm disease:	Case	Septic sore throat—Con.	Case
Chicken pox.....	26	Georgia.....	82	Montana.....	2
Dysentery (amoebic).....	1	Louisiana.....	45	Oklahoma †.....	9
Mumps.....	121	Impetigo contagiosa:		Oregon.....	6
Rocky Mountain		Kansas.....	6	Virginia.....	6
spotted fever.....	1	Montana.....	6	Tetanus:	
Septic sore throat.....	2	Oklahoma †.....	3	Alabama.....	4
Trachoma.....	10	Oregon.....	10	Georgia.....	1
Whooping cough.....	107	South Dakota.....	1	Kansas.....	4
		Lethargic encephalitis:		Louisiana.....	6
		Alabama.....	3	Montana.....	1
		Georgia.....	2	Trachoma:	
		Kansas.....	7	Montana.....	3
June 1934		Louisiana.....	2	Oklahoma †.....	3
South Dakota:		Montana.....	1	South Dakota.....	18
Chicken pox.....	31	Oregon.....	2	Trichinosis:	
Mumps.....	43	Texas.....	1	South Dakota.....	1
Trachoma.....	1	Virginia.....	1	Tularaemia:	
Whooping cough.....	84	Mumps:		Alabama.....	1
		Alabama.....	16	Kansas.....	2
		Georgia.....	25	Louisiana.....	1
July 1934		Idaho.....	3	Montana.....	3
Actinomycosis:		Kansas.....	63	Oregon.....	2
Kansas.....	1	Montana.....	5	Texas.....	1
Anthrax:		Oklahoma †.....	21	Typhus fever:	
Louisiana.....	1	Oregon.....	30	Alabama.....	24
Chicken pox:		South Dakota.....	41	Georgia.....	27
Alabama.....	3	Texas.....	121	Louisiana.....	1
Georgia.....	10	Virginia.....	30	Texas.....	88
Idaho.....	4	Ophthalmia neonatorum:		Virginia.....	1
Kansas.....	17	Alabama.....	2	Undulant fever:	
Montana.....	19	Oklahoma †.....	2	Alabama.....	4
Oklahoma †.....	3	Paratyphoid fever:		Georgia.....	3
Oregon.....	37	Georgia.....	5	Kansas.....	9
South Dakota.....	19	Kansas.....	5	Louisiana.....	4
Texas.....	109	Montana.....	1	Montana.....	4
Virginia.....	44	Texas.....	33	Oregon.....	3
Dengue:		Virginia.....	6	South Dakota.....	1
Georgia.....	1	Rabies in animals:		Texas.....	1
Texas.....	8	Alabama.....	62	Virginia.....	1
Devil's grippie (Dabney's		Kansas.....	4	Vincent's infection:	
grippie):		Louisiana.....	9	Kansas.....	5
Virginia.....	545	Rabies in man:		Montana.....	2
Diarrhea and dysentery:		Alabama.....	1	Oregon.....	5
Virginia.....	1,201	Rocky Mountain spotted		Whooping cough:	
Dysentery:		fever:		Alabama.....	144
Alabama (amoebic).....	5	Montana.....	5	Georgia.....	197
Georgia (amoebic).....	13	Oregon.....	1	Idaho.....	56
Georgia (bacillary).....	80	Virginia.....	11	Kansas.....	284
Kansas.....	3	Scabies:		Louisiana.....	41
Louisiana.....	12	Montana.....	1	Montana.....	64
Oklahoma †.....	37	Septic sore throat:		Oklahoma †.....	60
Oregon.....	2	Georgia.....	19	Oregon.....	129
Texas.....	95	Idaho.....	2	South Dakota.....	65
German measles:		Kansas.....	6	Texas.....	342
Alabama.....	3	Louisiana.....	4	Virginia.....	472
Kansas.....	4				
Montana.....	1				

† Exclusive of Oklahoma City and Tulsa.

EPIDEMIC ENCEPHALITIS IN ILLINOIS

The Director of Public Health of the State of Illinois reports that from August 1 to 29, 1934, 85 cases of epidemic encephalitis were reported in the State. The cases were scattered. The places reporting the largest number of cases were as follows:

Danville, Vermillion County.....	18	Chicago, Cook County.....	7
Canton, Fulton County.....	10	Paris, Edgar County.....	5
Bartonville, Peoria County.....	9	Danville Township, Vermillion County.....	4
Highland, Madison County.....	9	Peoria, Peoria County.....	4

No other place reported more than two cases during the period.

DENGUE IN FLORIDA

According to a report dated August 24, 1934, there were slightly less than 6,000 cases of dengue in Miami, Fla. The director of public health of the city of Miami, in a letter dated August 27, 1934, stated as follows: "Last week the number of new cases of dengue reported was 20 percent less than the previous week and the number of actual breeding places of *aegypti* found was 50 percent less." It was felt that the peak of the epidemic had been reached.

During the week ended August 25, 184 cases of dengue were officially reported in Miami. The disease was also reported from the following localities during the week:

Locality	County	Cases	Locality	County	Cases
Apopka.....	Orange.....	1	Merritt.....	Brevard.....	1
Brooksville.....	Hernando.....	1	New Smyrna.....	Volusia.....	1
Bradenton.....	Manatee.....	1	Orlando.....	Orange.....	1
Cocoa.....	Brevard.....	1	Palatka.....	Putnam.....	2
Eastport.....	Duval.....	2	Panama City.....	Bay.....	5
Fort Lauderdale.....	Broward.....	25	Punta Gorda.....	Charlotte.....	1
Hampton.....	Bradford.....	1	Tarpon Springs.....	Pinellas.....	3
Indian River City.....	Brevard.....	1	Tavares.....	Lake.....	1
Jacksonville.....	Duval.....	11	Umatilla.....	do.....	1
Key West.....	Monroe.....	(¹)	West Palm Beach.....	Palm Beach.....	6
Lynn Haven.....	Bay.....	2	Winter Park.....	Orange.....	2
McAlpin.....	Suwannee.....	1			

¹ The number of cases reported in Key West was not known.

WEEKLY REPORTS FROM CITIES

City reports for week ended Aug. 18, 1934

[This table summarizes the reports received regularly from a selected list of 121 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference.]

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland.....	0	0	0	0	2	1	0	2	3	3	15
New Hampshire:											
Concord.....	0	0	0	0	1	0	0	0	0	0	10
Manchester.....	0	0	0	0	0	0	0	0	0	0	15
Nashua.....	0			0		0	0		0	0	
Vermont:											
Barre.....	0			0		0	0		0	0	8
Massachusetts:											
Boston.....	5	0	3	9	12	0	3	4	33	33	176
Fall River.....	0	0	0	0	0	0	3	0	1	1	21
Springfield.....	0	0	1	2	0	0	1	0	3	3	22
Worcester.....	2	0	4	4	4	0	0	0	26	26	29
Rhode Island:											
Pawtucket.....	0	0	0	0	0	0	0	0	0	0	13
Providence.....	0	0	6	1	1	0	2	1	34	34	31
Connecticut:											
Bridgeport.....	0	0	1	1	0	0	6	0	1	1	
Hartford.....	0	1	0	3	1	0	0	0	0	1	36
New Haven.....	0	0	3	0	0	0	0	0	2	2	33
New York:											
Buffalo.....	0	0	0	5	9	0	3	0	24	24	92
New York.....	10	7	1	21	67	1	80	13	170	170	1,255
Rochester.....	0	0	1	1	2	7	0	0	12	12	53
Syracuse.....	0	0	4	3	3	1	0	0	31	31	43

City reports for week ended Aug. 18, 1934—Continued

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
New Jersey:											
Camden	0		2	0	0	1	0	0	0	8	19
Newark	0	1	0	1	3	1	0	2	0	28	75
Trenton	0		0	0	0	1	0	1	0	5	31
Pennsylvania:											
Philadelphia	0	1	0	2	13	9	0	17	6	149	373
Pittsburgh	5		0	6	11	25	0	6	1	36	112
Reading	0		0	0	1	0	0	0	0	7	18
Scranton	0			0		0	0	0	0	6	
Ohio:											
Cincinnati	0	2	0	0	4	3	0	9	0	4	118
Cleveland	3	10	0	14	5	6	0	17	1	59	185
Columbus	2	1	1	0	4	6	0	4	3	5	67
Toledo	0		0	5	2	5	0	3	1	23	80
Indiana:											
Fort Wayne	1		0	0	2	0	0	1	0	1	25
Indianapolis	0		0	0	5	3	0	3	3	13	
South Bend	0		0	1	0	1	0	0	0	0	11
Terre Haute	0		0	0	1	0	0	0	0	0	23
Illinois:											
Chicago	5		2	17	23	22	0	33	3	84	625
Springfield	0		0	0	2	1	0	0	2	2	22
Michigan:											
Detroit	2		0	3	8	13	0	10	5	80	198
Flint	1		0	0	3	1	0	1	1	8	26
Grand Rapids	0		1	0	0	2	0	1	0	4	19
Wisconsin:											
Kenosha	0		0	0	0	0	0	0	0	0	10
Milwaukee	1	1	1	20	2	12	0	3	3	63	83
Racine	0		0	0	0	0	0	1	0	18	8
Superior	0		0	0	0	1	0	0	0	0	13
Minnesota:											
Duluth	0		0	5	0	0	0	0	2	2	13
Minneapolis	1		0	1	1	6	0	1	0	3	64
St. Paul	0		0	0	5	2	0	3	0	10	69
Iowa:											
Davenport	0			0		0	0		0	0	
Des Moines	0		0	0	0	3	0	0	5	0	20
Sioux City	0			0		0	0		0	6	
Waterloo	0			0		1	0		1	4	
Missouri:											
Kansas City	0		0	2	3	7	0	3	1	0	116
St. Joseph	0		0	0	0	2	0	0	0	1	33
St. Louis	4		0	2	3	3	0	8	7	16	208
North Dakota:											
Fargo	0		0	0	0	0	0	0	0	40	4
Grand Forks	0		0	0	0	1	0	0	0	2	
South Dakota:											
Aberdeen	0			0		0	0		0	3	0
Sioux Falls	0			0		0	0		0	0	6
Nebraska:											
Omaha	8		0	1	2	3	0	2	1	4	51
Kansas:											
Topeka	0		0	1	2	0	0	0	0	10	28
Wichita	0		0	1	1	0	0	1	0	1	37
Delaware:											
Wilmington	1		0	0	0	0	0	0	0	8	31
Maryland:											
Baltimore	1		0	0	8	0	0	13	2	65	164
Cumberland	0		0	0	0	0	0	0	1	0	9
Frederick	1		0	0	0	1	0	0	0	3	4
District Col.:											
Washington	3		0	0	9	8	0	4	1	13	127
Virginia:											
Lynchburg	0		0	4	0	0	0	0	0	9	10
Norfolk	0		0	2	2	0	0	1	2	6	25
Richmond	0		0	3	2	1	0	1	0	2	40
Roanoke	1		0	0	1	3	0	0	1	0	15
West Virginia:											
Charleston	1		0	0	0	0	0	0	0	6	3
Huntington	0		0	0	0	2	0	0	0	0	
Wheeling	0		0	0	3	3	0	0	0	3	18
North Carolina:											
Raleigh	0		0	0	0	0	0	0	4	1	14
Wilmington	0		0	0	0	0	0	0	0	4	14
Winston-Salem	1		0	1	1	0	0	0	0	17	14

City reports for week ended Aug. 18, 1934—Continued

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
South Carolina:											
Charleston	0	9	0	0	1	0	0	2	1	0	25
Columbia	0	0	0	0	1	0	0	0	0	0	18
Greenville	1			0		0			0	2	
Georgia:											
Atlanta	7	4	1	0	1	2	0	4	6	1	72
Brunswick	0	0	0	0	0	0	0	0	0	0	3
Savannah	1	0	0	0	0	0	0	1	1	12	17
Florida:											
Miami	0	2	0	0	2	1	0	2	1	0	26
Tampa	3		0	0	3	0	0	2	0	0	28
Kentucky:											
Ashland	1		0	0	0	0	0	0	0	0	16
Lexington	0	0	0	0	0	0	0	0	0	1	6
Louisville	2		0	3	2	2	0	3	2	1	69
Tennessee:											
Memphis	0	0	0	0	4	0	0	4	0	13	103
Nashville	1	0	0	0	3	2	0	6	1	10	
Alabama:											
Birmingham	1	1	0	0	0	0	0	3	11	4	44
Mobile	4	0	0	0	0	0	0	1	0	0	23
Montgomery	1		0	0	0	0	0	0	2	0	
Arkansas:											
Fort Smith	0			0		0	0	0	0	1	
Little Rock	0			0		0	0	0	0	1	
Louisiana:											
New Orleans	4		0	2	5	1	0	16	6	0	156
Shreveport	0		0	0	3	0	0	1	0	2	55
Oklahoma:											
Oklahoma City	1	4	0	0	3	2	0	0	2	4	50
Tulsa	1			0	0		0		4	4	
Texas:											
Dallas	7		0	0	2	1	0	2	0	1	70
Fort Worth	1	0	0	0	1	3	0	2	0	0	35
Galveston	0	0	0	0	1	0	0	1	0	0	12
Houston	5	0	0	0	1	2	0	7	3	0	68
San Antonio	0		0	0	2	0	0	6	0	0	65
Montana:											
Billings	0		0	0	0	0	0	0	0	2	6
Great Falls	0	0	0	1	2	0	0	0	0	0	10
Helena	0	0	0	0	0	2	0	0	0	0	12
Missoula	0	0	0	0	0	0	0	1	1	0	8
Idaho:											
Boise	0		0	0	0	0	0	0	0	0	3
Colorado:											
Denver	1	23	0	10	2	12	0	3	5	12	72
Pueblo	0	0	0	4	1	0	0	0	0	4	10
New Mexico:											
Albuquerque	0		1	0	0	1	0	3	0	0	9
Utah:											
Salt Lake City	0		0	0	1	1	0	1	2	50	19
Nevada:											
Reno	0		0	0	0	1	0	0	0	0	1
Washington:											
Seattle	0		0	1	7	2	6	2	0	11	78
Spokane	0		0	1	3	1	0	3	0	9	31
Tacoma	0		0	2	1	0	0	1	0	1	21
Oregon:											
Portland	0		0	0	2	7	0	4	0	7	53
Salem	0		0	0		0			0	1	
California:											
Los Angeles	6	5	0	3	14	15	0	19	3	13	294
Sacramento	0		0	1	3	2	0	1	1	4	26
San Francisco	0		0	11	11	3	0	7	1	28	147

City reports for week ended Aug. 18, 1934—Continued

State and city	Meningococcus meningitis		Pollo- mye- litis cases	State and city	Meningococcus meningitis		Pollo- mye- litis cases
	Cases	Deaths			Cases	Deaths	
Maine:				South Dakota:			
Portland.....	0	0	2	Sioux Falls.....	0	0	1
Massachusetts:				Nebraska:			
Boston.....	0	0	1	Omaha.....	0	1	0
Connecticut:				Maryland:			
Bridgeport.....	1	1	0	Baltimore.....	0	0	2
New York:				District of Columbia:			
Buffalo.....	0	0	3	Washington.....	0	0	1
New York.....	0	1	0	Virginia:			
Pennsylvania:				Roanoke.....	1	1	0
Philadelphia.....	1	0	1	West Virginia:			
Pittsburgh.....	1	0	0	Charleston.....	0	0	1
Reading.....	0	0	1	Wheeling.....	0	0	1
Ohio:				Tennessee:			
Cincinnati.....	1	0	4	Memphis.....	0	0	2
Cleveland.....	1	0	3	Texas:			
Toledo.....	0	0	1	Houston.....	0	0	1
Illinois:				San Antonio.....	0	0	1
Chicago.....	5	1	8	Montana:			
Michigan:				Billings.....	0	0	4
Detroit.....	0	0	5	Great Falls.....	0	0	2
Wisconsin:				Helena.....	0	0	14
Milwaukee.....	1	0	0	Missoula.....	0	0	6
Minnesota:				Colorado:			
Minneapolis.....	0	0	1	Denver.....	0	0	1
St. Paul.....	0	0	2	Washington:			
Iowa:				Seattle.....	1	0	3
Des Moines.....	1	0	0	Spokane.....	0	0	13
Sioux City.....	0	0	1	Oregon:			
Missouri:				Portland.....	0	0	2
Kansas City.....	0	1	1	California:			
St. Joseph.....	0	0	1	Los Angeles.....	0	1	23
				San Francisco.....	0	0	3

Dengue.—Cases: Charleston, S.C., 3; Brunswick, Ga., 1; Miami, 199; Birmingham, 3.

Lethargic encephalitis.—Cases: Newark, 1; Portland, Oreg., 1; St. Louis, 2.

Pellagra.—Cases: Atlanta, 2; Savannah, 2; Miami, 1; Birmingham, 1; Dallas, 2; San Francisco, 1.

Typhus fever.—Cases: New York, 1; Baltimore, 1; Atlanta, 2; Mobile, 1; Montgomery, 1; Dallas, 3; Fort Worth, 1; Houston, 1. Deaths: Shreveport, 1; Dallas, 1.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—2 weeks ended August 11, 1934.—During the 2 weeks ended August 11, 1934, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis				2	1					3
Chicken pox		3	1	37	121	10	20	9	16	217
Diphtheria		2	5	27	10	4	6			54
Dysentery				2	4					6
Erysipelas				4	2	3	2	3	1	15
Influenza		11			1				14	26
Lethargic encephalitis				1						1
Measles		1	3	193	47	69	3	2	3	321
Mumps					63	1	2		18	84
Paratyphoid fever					2					2
Pneumonia		6		9	5				2	13
Poliomyelitis		2		18			1			30
Scarlet fever		10	1	70	63	19	12	10	33	218
Trachoma									6	6
Tuberculosis	3	1	33	96	150	6	30	5	30	354
Typhoid fever			6	29	39		2		5	81
Undulant fever				5	4				1	10
Whooping cough		2		357	290	15	71	13	24	772

CHINA

Manchuria—Anthrax.—According to information dated August 25, 1934, there was an epidemic of anthrax in a railway construction camp and surrounding territory between Chinchia, Wopung, and Lungchen, Manchuria. It was said that approximately 2,000 work horses, many other animals, and 13 persons had died from the disease.

Manchuria—Plague.—According to a report dated July 20, 1934, there had been 25 deaths from bubonic plague in the vicinity of Tungliao up to July 10. The first outbreak of plague during the year was at Taipingchiao, a village near Nungan, where it was reported on July 6 that three persons had died of plague. There were 15 cases of plague reported from the Nungan area from June 3 to July 5. The usual preventive measures were said to have been taken to prevent the spread of the disease.

Shanghai—Campaign against cholera.—According to a report of the Central Cholera Bureau of the National Quarantine Service of China, dated July 13, 1934, a vigorous campaign was being carried on for the

prevention of cholera. In Shanghai the various waterworks companies were distributing free drinking water to the poorer districts which do not have a piped water supply. Lectures were being given, posters and leaflets were distributed, and free anticholera inoculations were being given at health centers, schools, factories, and by wagons visiting different parts of the city. Up to the end of June, 310,842 anticholera inoculations had been done in Shanghai. No case of cholera had been reported in Shanghai to date of the report.

ITALY

Communicable diseases—4 weeks ended March 4, 1934.—During the 4 weeks ended March 4, 1934, cases of certain communicable diseases were reported in Italy as follows:

Disease	Feb. 5-11		Feb. 12-18		Feb. 19-25		Feb. 26-Mar. 4	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax.....	15	12	14	11	16	16	10	7
Cerebrospinal meningitis.....	11	10	22	20	12	10	11	10
Chicken pox.....	355	106	304	111	339	106	452	123
Diphtheria and croup.....	566	323	615	342	560	301	529	298
Dysentery.....	6	4	2	2	1	1	4	4
Lethargic encephalitis.....	2	2					4	4
Measles.....	2,062	271	2,102	270	2,172	278	2,814	310
Poliomyelitis.....	1	1	6	5	3	3	6	6
Scarlet fever.....	266	110	322	128	272	108	265	113
Typhoid fever.....	197	133	217	133	215	140	241	141

JAMAICA

Communicable diseases—4 weeks ended August 11, 1934.—During the 4 weeks ended August 11, 1934, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Cerebrospinal meningitis.....		1	Leprosy.....		1
Chicken pox.....	2	7	Puerperal fever.....		3
Dysentery.....	2	4	Tuberculosis.....	32	99
Erysipelas.....		2	Typhoid fever.....	21	76

PUERTO RICO

Notifiable diseases—4 weeks ended August 11, 1934.—During the 4 weeks ended August 11, 1934, cases of certain notifiable diseases were reported in the municipalities of Puerto Rico as follows:

Disease	Cases	Disease	Cases
Chicken pox.....	57	Ophthalmia neonatorum.....	4
Diphtheria.....	41	Puerperal fever.....	1
Dysentery.....	65	Syphilis.....	38
Erysipelas.....	3	Tetanus.....	3
Influenza.....	443	Tuberculosis.....	782
Malaria.....	1,530	Typhoid fever.....	35
Measles.....	32	Whooping cough.....	170
Mumps.....	45		

Influenza.—Cases of influenza were reported in the municipalities of Puerto Rico from August 14 to August 18, 1934, as follows:

	Cases		Cases
Aug. 14, 1934.....	237	Aug. 17, 1934.....	1,914
Aug. 15.....	530	Aug. 18.....	915
Aug. 16.....	3,147		

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 Aug. 31, 1934, pp. 1037-1049. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued Sept. 28, 1934, and thereafter, at least for the time being, in the issue published on the last Friday of each month.)

Plague

Indo-China.—During the week ended August 18, 1934, one case of plague was reported at Saigon-Cholon, Indo-China. One death from plague was reported at Pnom-Penh during the week ended August 11.

Peru.—A case of plague was reported on August 8, 1934, at Hacienda Palpa, in the Huaral Valley, 95 kilometers from Lima, Peru.

Yellow Fever

Ivory Coast.—During the week ended August 11, 1934, one fatal case of yellow fever was reported at Bingerville, Ivory Coast.

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