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THE ADMINISTRATION OF MERCURIAL PREPARATIONS IN LEPROSY

Preliminary Report I—Mercurochrome Soluble 220

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(Dr. HAROLD K. MARSHALL, because of absence from the Hospital, was prevented from collaborating in; this report. Due credit should be given him and Doctor Denney for having initiated the treatment.)

That leprosy is, in some measure, amenable to treatment, is a conclusion gaining recognition as a result of observations made during the last decade; but that a specific is known is not generally acknowledged. Methods of treatment favorably reported by one observer fail of success at the hands of another. The very numbers of medicaments used in the treatment of leprosy *de facto* suggest that no one drug or method of treatment has as yet proved to be completely satisfactory. In the last decade interest has centered largely in the administration of certain vegetable and animal oils and their derivatives. With the methods at present employed, it has been the experience in this hospital that final curative results may not be expected in a percentage sufficient to justify the exclusion of further therapeutic experimentation.

Among the remedial agents used in the treatment of leprosy, mercury early occupied a prominent position. More than 30 years ago its use was revived, the hypodermatic superseding the older methods of administration.

Brault (1), in 1898, reported on the treatment of tubercular leprosy with calomel; and (2) advocated mercurial treatment of leprosy for the reason that marked improvement had followed its use in many cases.

Haslund (3), in 1899, reported on the treatment of leprosy by the injection of *formamide de mercure*, and referred to a report of Radcliffe Crocker and to one case of Lustgarten showing considerable amelioration after injection of *sublime de mercure.*

De Luca (4), in 1903, reported two cases of leprosy treated by intravenous injection of *sublime de mercure.* He gave 12 injections of 5 mmgs. each.

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Meyer (5), in 1904, commented on the therapeutic value of mercury in leprosy and discussed several preparations—calomel, benzoate of mercury, bin-iodide, etc.

From the paucity of further reports, it is reasonable to assume that additional experimentation with the older preparations of mercury was not productive of curative results.

Renewed interest in mercury as a germicidal agent in diseases other than leprosy has recently been evoked by the introduction of mercurochrome.

Young and Hill (6), March 1, 1924, reported satisfactory results following the intravenous injection of mercurochrome in a series of seven (nonleprous) cases of septicemia.

Impressed by the action of mercurochrome in the ordinary types of septicemia, its experimental administration was determined upon to combat secondary infections in leprosy.

The first patient available for experimentation was a white woman, age 60, of the anæsthetic type, who presented a typical picture of terminal disease. She had been bedfast for eight weeks as a result of chronic osteo-myelitis of one foot, the condition gradually becoming more serious until March 6, 1924, when a gangrenous process became evident with coincident prostration from septicemia. The patient was not considered amenable to surgical intervention. She was given an intravenous injection of 35 c. c. of a 1 per cent solution of mercurochrome (by Dr. H. K. Marshall). A severe reaction followed, with chill and profuse sweating, after which occurred slight vomiting and considerable diarrhea, accompanied by mild rectal tenesmus. Within 24 hours she showed marked improvement and made request that she be given additional injections. On the third day she received a second injection consisting of 17 c. c. of 1 per cent mercurochrome, which was followed by a similar reaction and improvement. The unsatisfactory progress of the gangrenous foot, however, continued unmodified by the treatment and the patient succumbed May 29, 1924.

While the result of this experiment was without ultimate benefit to the patient, the unexpected prolongation of her life appeared to be ample justification for further study in patients with less serious infections. Several septic cases were selected and treated with encouraging results, and it seemed, from their improved appearance, that the course of leprosy was being favorably affected.

Forty-four lepers have been given injections of mercurochrome, and each patient has now been under observation for at least a year, warranting, it is believed, the submitting of a preliminary report.

The cases selected had the following status:

Twenty patients were of the active advanced type. Of these, 10 were terminal, mutilated, and steadily approaching dissolution. In

this group of 10, 3 were semiambulant, 2 were blind, 2 were bedfast without intercurrent complication, 1 had advanced nephritis, 1 had tertiary lues, and 1 had terminal pulmonary tuberculosis. Seven active advanced lepers had ulcerating tubercles on the face, arms, and legs, and destructive laryngitis, as well as severe ophthalmia. Two were ambulant, but had destructive eye lesions. One was greatly mutilated by ulcerating fibrous nodules.

Sixteen patients had active, moderately advanced leprosy with a variety of symptoms, consisting in the main of ophthalmia, ulcerating tubercles, neuritis, laryngitis, and successive attacks of leprous fever with coincident outcroppings of evanescent tubercles.

Six patients had active leprosy of comparatively short duration. Of these, three were accustomed to periodic attacks of leprous fever, associated with neuritis and outcroppings of evanescent tubercles, two were without symptoms, aside from macules widely distributed over the body, and one had fibrous tubercles scattered over the face and trunk.

Two patients were lepers in whom the disease showed no signs of activity and had left no stigmata. These patients served, therefore, as control cases.

A standard 1 per cent solution of mercurochrome in freshly distilled and autoclaved water was prepared for each day's use. The dosage was at first calculated on a basis of 5 milligrams per kilogram of body weight, and injections were made by syringe into a cubital vein once weekly.

Within an hour after the first injection of the maximum dose the patient experienced a severe chill, followed promptly by fever ranging from 38° C. to 42° C. Nausea and vomiting ensued in from one-half hour to one hour, promptly followed by diarrhea of a rather severe nature, and, in a few instances, by rectal tenesmus. The symptoms reached a maximum intensity in a few hours and subsided almost completely within 24 hours, leaving the patient feeling better than he had felt for some time. Following the second or third injection, 57 per cent of the patients complained of salivation and aching in the gums or teeth. The distress in six patients reached the stage of severe stomatitis with marked buccal cellulitis and edema in the maxillary region. In the latter cases, injections were discontinued until the mouths returned to normal condition.

It shortly became evident that the lepers could not tolerate doses calculated at 5 milligrams per kilogram of body weight without serious discomfort and possible danger, and the routine dosage was accordingly reduced to 2.5 milligrams per kilogram of body weight, with such slight variations as were indicated by the individual's condition. As a further prophylactic measure, each patient was

given careful dental treatment. Further untoward reactions were rarely met with.

Phenolsulfonephthalein renal function tests failed to show evidence of damage to the kidneys as a result of mercurochrome injections in this experiment. It should be noted, however, that where definite kidney disorder was evidenced, by the presence of albuminuria or by low phenolsulfonephthalein output, the administration of mercurochrome was made with due caution.

RESULTS

Seven patients remain unchanged. Of these, one improved slightly and relapsed to his pretreatment condition; one was surreptitiously taking chaulmoogra oil and was dropped from the experiment; one had chronic nephritis and was given but 3 c. c. weekly; two were without stigmata of leprosy and showed no change; one quiescent anæsthetic and one nodular case were unchanged.

Six patients showed slight improvement. In one of these a change was evidenced by the healing of ulcerating tubercles—in one by the subsidence of an acute ophthalmia, in one by decrease in severity of neuritis, and in three by general improvement in health.

Six patients showed moderate amelioration by improvement in general health and morale, the healing of ulcers, the diminution in the severity of ophthalmia and laryngitis, and the fading in the inflammatory condition of macules.

Sixteen patients showed marked improvement either in general health or in the subsidence of certain leprous manifestations. These 16 cases appear to be of sufficient interest to warrant some individual description, which is submitted as follows:

Case No. 1, male, American, 25 years of age, active moderately advanced mixed type, with anæsthetic symptoms predominating. For several months patient had been steadily becoming worse, his most pronounced symptoms being painful ulcerations over arms and legs, inability to obtain satisfactory rest at night, and loss of 8 pounds in three weeks before treatment was started. At the end of five weeks' treatment he professed to feel fine and sleep well, appetite excellent, ulcers clean and nearly all about half healed; had returned to work as hospital orderly. At the end of five months' treatment was in excellent condition, although still evidently a case of active leprosy. Condition of leprosy at end of 12 months: Stationary; most of ulcers healed. Gain in weight, 3 pounds.

Case No. 2, male, American, 56 years of age, active advanced mixed type with nodular symptoms predominating. Had been an infirmary patient for nine months, bedfast five months and practically helpless, with no appetite, and evidently steadily approaching

dissolution. After five injections, averaging 20 c. c., was remarkably improved, with good appetite and normal interest in surroundings. Began spending time daily in wheel chair and later pushing himself around without assistance; the skin began exfoliating over forearms and legs, leaving an unpigmented nearly normal skin at the site of what was formerly almost black, indurated, parchmentlike skin. At the end of five months, while still a wheel-chair patient, was largely able to care for himself and appeared to be slowly gaining strength. At the end of 12 months is somewhat stronger, able to walk short distances alone, and appears to be continuing his general improvement. In the last six months his leprosy appears to have become stationary. Gain in weight, 16 pounds.

Case No. 5, male, Greek, 46 years of age, active advanced mixed type with nodular symptoms predominating. Had been a bed patient for three months with nearly constant leprous fever, increase in permanent tubercles, loss of appetite, marked lassitude, and extremely low morale. After four injections was evidently stronger, with excellent appetite, but with very severe stomatitis which interfered with mastication, necessitating liquid diet. Morale became excellent, permanent tubercles on face were clearing up, and he was no longer bedfast. Stomatitis continued, necessitating discontinuance of treatment for five weeks, after which time he was returned to treatment calculated at 2.5 milligrams per kilogram. Five months after treatment was begun was still improving in strength and general health and his leprosy appeared to be considerably ameliorated. At the end of 12 months his general condition is one of steady improvement, the unfavorable progress of leprosy having been apparently checked. Gain in weight, 28 pounds. (Pl. I.)

Case No. 6, male, American, 26 years of age, active moderately advanced mixed type with anæsthetic manifestations predominating. Accustomed to having numerous outbreaks of evanescent tubercles accompanied by leprous fever, considerable malaise, nausea, and apparently tending toward dissolution. Had trophic ulcers of feet and hands, stubbornly resistant to routine medication. At the end of six weeks was having but a slight amount of fever and only an occasional new evanescent tubercle; many of the older ones had disappeared. At the end of five months ulcers on ankles were completely healed (Pl. II), and patient felt that his general trend was one of steady improvement. At the end of 12 months, is ambulant and is daily occupied with tasks about the hospital which require considerable physical stamina. No marked change in leprosy during the past six months. Loss in weight, 5 pounds.

Case No. 7, male, Greek, 31 years of age, active advanced mixed type with typical leprous nodules and with numerous ulcerations which may have been syphilitic. Wassermann reaction strongly

positive with both the old and Kolmer techniques. Had been an infirmary patient for several months, accustomed to daily fevers and chills with both new permanent and evanescent tubercles; arms and hands swollen and painful; severe laryngitis and ophthalmia. At the end of one month, was ambulant, although still very weak and had moderate stomatitis; appeared to be generally improved. At the end of five months, showed marked general improvement, being ambulant and evidently much stronger physically, there being but slight change in his leprous condition. At the end of 12 months, is still ambulant and has gained slightly in strength, although there has been but slight improvement in his superficial ulcerations. (This patient has also had intensive antisyphilitic treatment). Gain in weight, 8 pounds.

Case No. 11, female, American, 24 years of age, active moderately advanced nodular type. At the time when treatment was started, was suffering from an acute erysipeloid dermatitis of face and both legs. Was markedly toxic, as evidenced by hyperpyrexia, nausea, and vomiting; also had a large ulcer on the right leg, of six months' duration, which had steadily become larger in spite of previous routine treatment. At the end of one month's treatment, the erysipeloid condition had practically disappeared and the leg ulcer had healed. After four months' treatment, the patient's general condition was markedly improved, leprosy ameliorated. At the end of 12 months, patient's general condition is excellent and her leprosy appears to be further ameliorated. Weight during the year was approximately stationary.

Case No. 13, male, Italian, 57 years of age, active moderately advanced mixed type with nodular symptoms predominating. For more than a year previous to treatment, had suffered from ophthalmia, with some ulnar neuritis, general malaise, poor appetite, and inability to obtain satisfactory sleep because of the ophthalmia and neuritis. At the end of one month, pain had almost completely disappeared from the eye; had suffered no neuritis; appetite was good, although suffering from moderate stomatitis. At the end of five months, eye condition continued satisfactory, although vision was unchanged; generally much improved in health. At the end of one year, his condition is but slightly changed as compared with the observations made at the end of five months. Gain in weight, 20 pounds.

Case No. 14, male, American, 32 years of age, active advanced mixed type with nodular symptoms predominating. At the time when treatment was started, patient was suffering from a large ulcer on the anterior surface of the right leg, which had existed in a relatively unchanged condition for more than a year; was subject to occasional attacks of leprous fever, with outcroppings of evanescent

tubercles. At the end of four months' treatment, the leg ulcer was nearly healed and he had but few evanescent tubercles and had made marked improvement in general health, induration in the face being less marked than formerly and the complexion more nearly normal. Approximately seven months after the beginning of treatment and two months after patient had voluntarily ceased treatment, he suffered from leprous fever, with outcroppings of evanescent tubercles and severe neuritis in both ulnar nerves and in both perineal nerves. During this attack he lost approximately 20 pounds, and, after the subsidence of the attack, regained 11 pounds, with a net loss of nine pounds in the year. Physical condition at the end of 12 months, excellent; leg ulcer completely healed, with leprosy approximately stationary.

Case No. 16, male, French-American, 48 years of age, active advanced mixed type with nodular symptoms predominating. Had been becoming steadily worse for over a year, with painful ulcerations on the arms and legs, severe ophthalmia, and almost complete aphonia. At the end of one month, showed marked improvement, ulcers on feet having healed, those on his face having been much improved, and the ophthalmia being almost quiescent. After four months' treatment, all ulcers had healed, voice was hoarse but markedly improved, pain had disappeared, he had no new tubercles and had gained steadily in strength. At the end of 12 months, condition is approximately stationary. Loss in weight, 2 pounds. (Pl. III.)

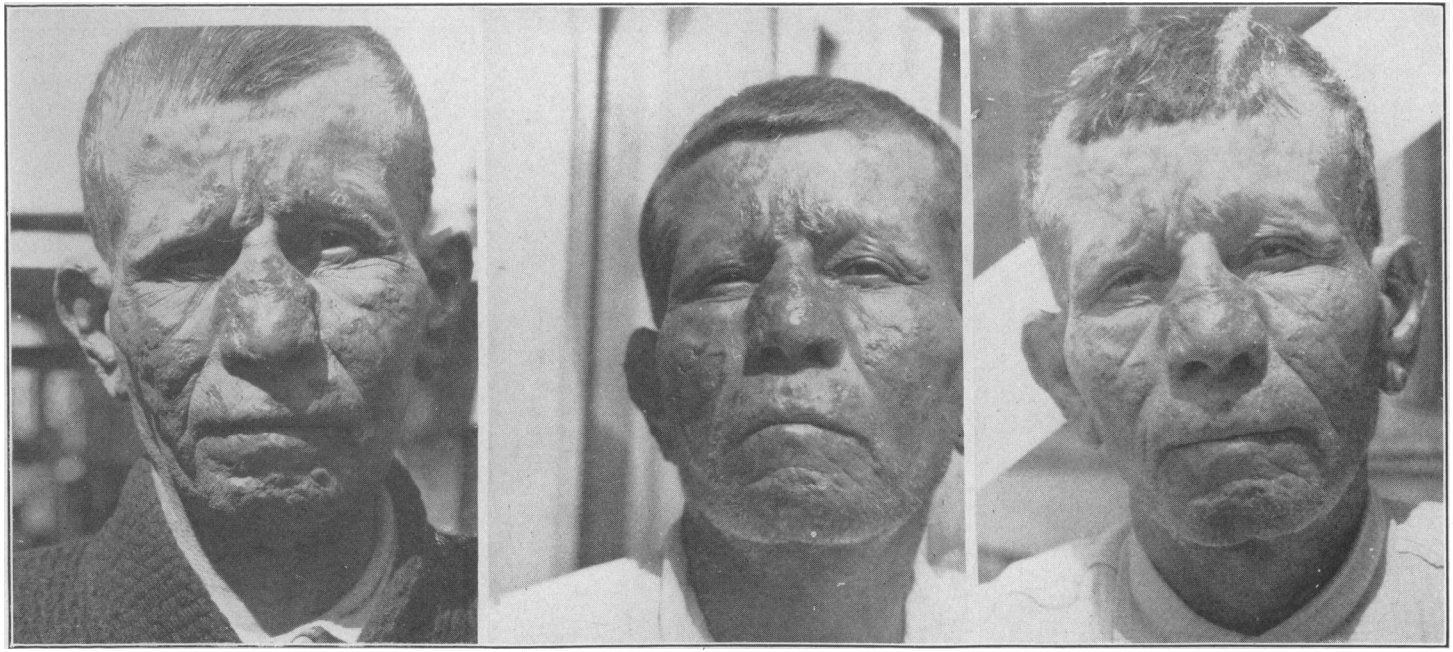
Case No. 23, female, American, 30 years of age, active advanced mixed type with tubercular symptoms predominating. Patient had been suffering for four months with severe leprous reactions consisting of chills, fever, ulnar neuritis, and outcroppings of evanescent tubercles. After six injections, was evidently much improved. Neuritis had disappeared, chills and fever gradually becoming less intense and the outcroppings of evanescent tubercles were less marked. At the end of the fourth month of treatment, suffered a relapse with recurrence of former symptoms accompanied by almost complete loss of appetite and persistent nausea and some vomiting. Treatment discontinued. Six months after the beginning of treatment, the patient began to recover strength lost during the relapse and steadily progressed satisfactorily until, at the end of 12 months, is generally in much better condition than when treatment was started. Has not suffered from neuritis, chills and fever, or evanescent tubercles. Appetite and morale excellent. General trend toward steady improvement. Although having lost 28 pounds in the first four months of treatment, since discontinuance of treatment patient has regained 15 pounds, with a net loss of 13 pounds for the year.

Case No. 26, male, Italian, 67 years of age, active moderately advanced nodular type, admitted to the hospital April 4, 1924, and was immediately vaccinated against smallpox and suffered a severe leprous reaction, similar in all respects to the phenomena reported by Denney and Hopkins (7), consisting of acute evanescent tubercles, considerable fever, and appearance of new permanent tubercles on face and arms. At the end of one month's treatment, there was no visible improvement in the leprosy, although patient claimed to feel markedly improved. At the end of five months' treatment, the unfavorable progress of leprosy appeared to have been checked and improvement to have begun; the leprous reactions ceased, and nodules of the semipermanent type began to disappear. At the end of a year, his leprosy is markedly ameliorated, nodules having decreased considerably in size. Gain in weight, 1 pound. (Pl. IV.)

Case No. 27, female, American, 29 years of age, active advanced mixed type with nodular symptoms predominating. Had suffered for several years with ulcerating nodules, severe ophthalmia, laryngitis, arthralgia, and severe attacks of leprous fever. After two injections of 25 c. c. each, became markedly salivated. Treatment discontinued for two weeks and reinstituted on a basis of 2.5 milligrams per kilogram. At the end of two months, was greatly improved, ulcers healing, ophthalmia diminished, arthralgia disappeared, voice less husky, and leprous fever less intense. At the end of five months, was greatly improved generally and her leprosy appeared to be stationary. At the end of the year, her general physical condition continues to be satisfactory with but slight further change in her leprosy. Gain in weight, 22 pounds.

Case No. 29, negress, 30 years of age, active early maculo-anæsthetic type; face, back, and arms covered with large, slightly raised, erythematous macules. At end of one month's treatment, macules no longer erythematous but becoming depigmented. At end of four months, macules were smooth without evidence of inflammation and regaining some pigment although still considerably lighter in color than surrounding normal skin; health continued excellent. At the end of twelve months, there has been no further progress noted in her leprosy. Gain in weight, 21 pounds.

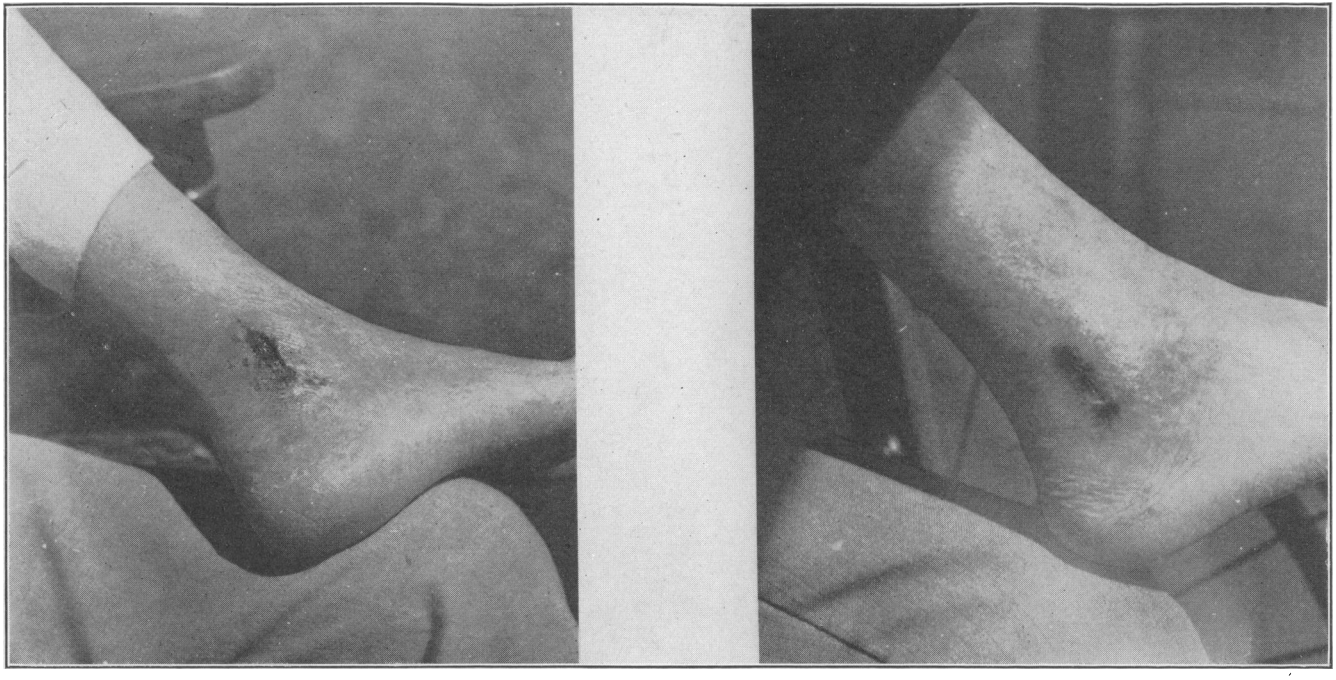
Case No. 31, female, American, 41 years of age, mixed type with nodular symptoms predominating. Was suffering from progressive laryngitis, partial aphonia, and evanescent tubercles, but otherwise in good condition. At the end of one month's treatment, stated that she felt better, but exhibited no definite physical change. At end of four months, had no evanescent tubercles, laryngitis improved, voice stronger, and almost complete disappearance of leprous infiltrations. At end of a year, is in excellent general physical condition,



Case No. 5 six weeks after beginning treatment. Diffuse thickening of tissues of forehead, nose, cheeks, and chin; discrete nodules

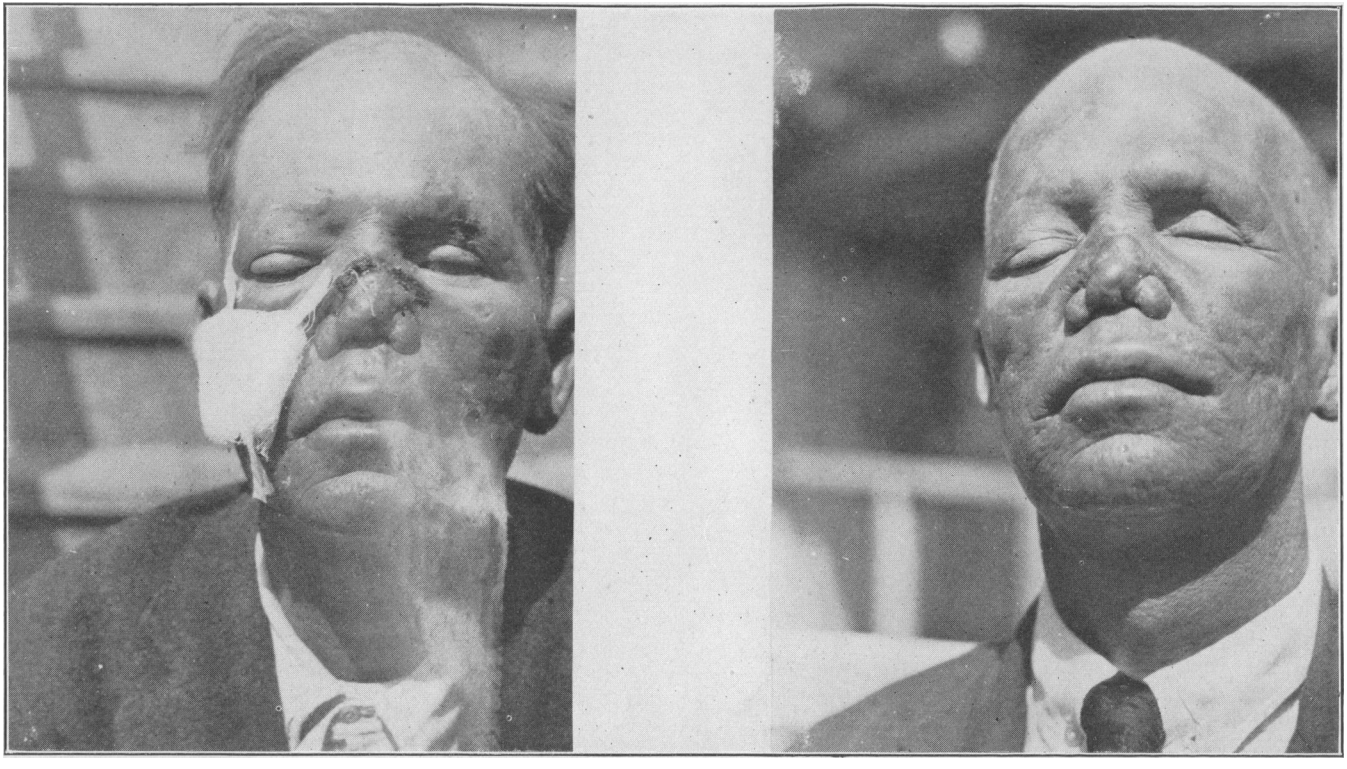
Five months after beginning treatment. Partial disappearance of infiltrations and nodules

Twelve months after beginning treatment. Diminished infiltration and complete disappearance of many small nodules



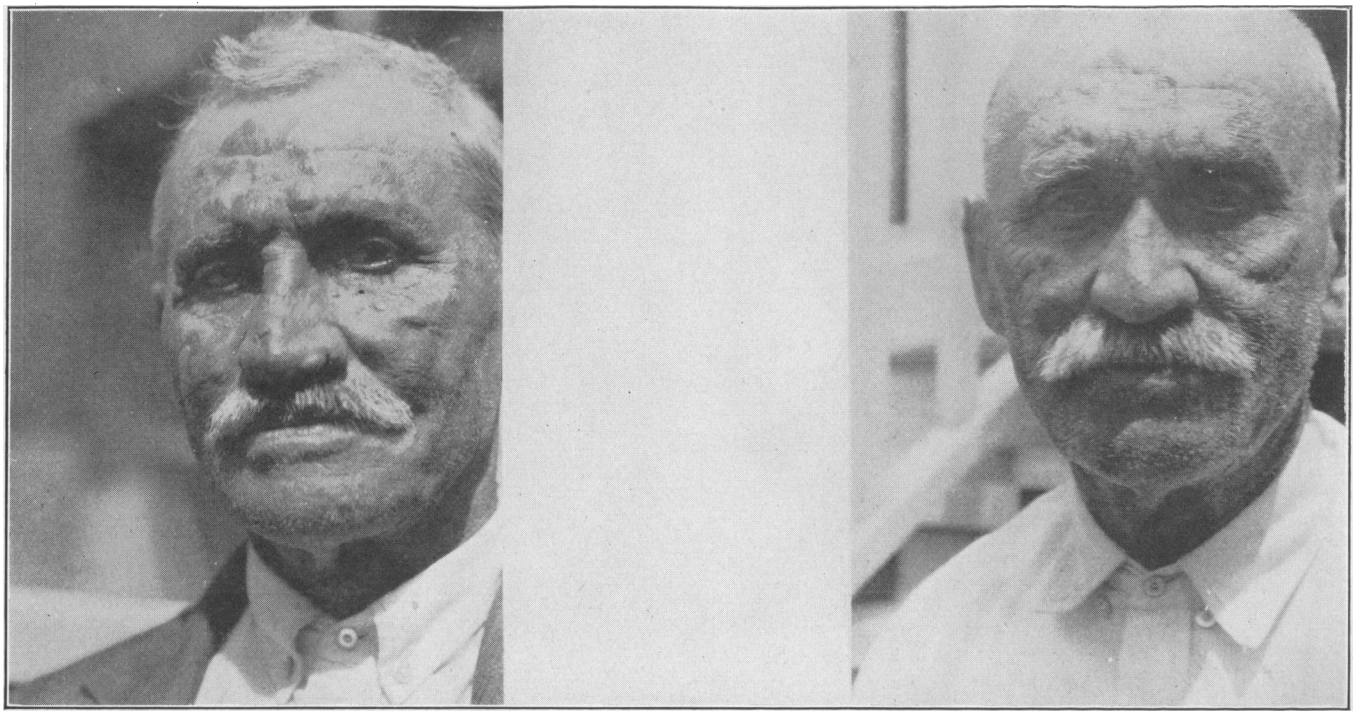
Case No. 6 six weeks after beginning treatment. Leprous ulcer, showing repair in progress

Same, four and one-half months after beginning treatment. Complete repair



Case No. 16 four weeks after beginning treatment. Ulcerating leprous nodules on bridge of nose, both cheeks, and left eyebrow

Same, four months after beginning treatment. Complete repair



Case No. 26 three and one-half months after beginning treatment. No visible change. Note large, discrete nodules on forehead, bridge of nose, and nasal alae

Same, twelve months after beginning treatment. Disappearance of nodules and pitting of forehead. Thinning of bridge of nose and disappearance of nodules from nasal alae

but with no further marked improvement in leprosy. Loss in weight, 12 pounds.

Case No. 35, male, Porto Rican, 28 years of age, active advanced mixed type with nodular symptoms predominating. Was suffering from dementia precox. His arms and legs were covered with suppurating ulcers. Because of a suspicion that physicians and nurses were trying to poison him, had steadfastly refused all treatment except dressings with sterile gauze and bandages. Was persuaded into receiving six injections of mercurochrome. After the second injection, the ulcers became clean and showed evidence of healing, and he consented at that time to wet dressings of 1 per cent mercurochrome. At the end of two months, showed improvement in general health and marked improvement in mental condition by his ready cooperation with attendants, interest in surroundings, and even by joking with fellow patients. Salivation and stomatitis unfortunately disturbed his equilibrium and he refused further intravenous injections. At the end of three months, ulcers were practically all healed and leprosy nearly stationary. Five months after treatment was begun, or three months after cessation of treatment, his physical condition had returned to its pre-treatment status and he again consented to injections, which were continued at irregular intervals for seven months. The net result, at the end of 12 months, is considerable improvement in general health, slight stabilization of his mental condition, and the healing of many of the superficial ulcerations. Gain in weight, 2 pounds.

Case No. 37, female, American, 26 years of age, active moderately advanced mixed type with nodular symptoms predominating. Face markedly infiltrated, the cheeks presenting brown patches and nodules approximately one-half cm. above the normal level. At the end of two months, complexion considerably clearer, induration less marked, general condition consistently good. At the end of 12 months, comparatively few traces of the original lesions remain. General condition of the patient consistently good. Loss in weight, 3 pounds.

Two patients are slightly worse than when treatment was begun.

Three patients were moderately worse at the end of 12 months:

Case No. 3, male, Filipino, age 26, active advanced nodular type, bedfast for a number of weeks, subject to almost continuous chills and fever and repeated outcroppings of evanescent tubercles, listless and apparently approaching dissolution; suffering violent neuritis in arms and legs, with coincident severe ophthalmia. After five injections, professed marked improvement, was without chills or fever, was not suffering from evanescent tubercles, neuritis completely absent, ophthalmia practically absent, morale excellent, discharged from infirmary and returned to quarters, where he remained, con-

tinuing to take weekly injections for four months, when some former symptoms recurred, notably chills and fever; demonstrable leprous lesions were not affected. Clinical and laboratory examinations confirmed suspicion of activated pulmonary tuberculosis, and further injections were administered with caution. General condition slowly, but steadily, became more unsatisfactory and, 12 months after beginning treatment, was again approaching early dissolution.*

Case No. 24, female, American, 42 years of age, active advanced mixed type with anæsthetic symptoms predominating; was selected for treatment because of severe headaches, probably dependent upon ophthalmia of long standing; as a result of pronounced photophobia, was confined to room for five weeks. After three injections, the headaches subsided and the eye condition was markedly improved; the patient was able to leave her room and was without photophobia. After a total of eight injections, experienced no further headaches or ophthalmia, but suffered a severe attack of leprous fever succeeded by an outcropping of tubercles. Patient refused further injections. Gain in weight, 10 pounds.

Case No. 38, male, American negro, age 32, active early anæsthetic type. Began treatment when in excellent physical condition, having numerous serpentine patches on face and a few similar ones on arms and back; the patches on face presented elevated margins and slight erythema. During the first six months of treatment, his skin lesions showed marked improvement. Subsequently, fever and night sweats were complained of and physical examination revealed evidence of early pulmonary tuberculosis, which was confirmed by X ray and sputum examinations, and by guinea-pig inoculation. After 12 months of treatment and observation, it is evident that his pulmonary condition has become progressively less satisfactory. His leprous lesions have continued to improve. Loss in weight, 7 pounds.

Three patients died during the 12 months of treatment and observation.

Case No. 9, male, American, 25 years of age, active moderately advanced nodular type with moderately advanced pulmonary tuberculosis, cervical adenitis, and tertiary lues. Had been an infirmary patient for 10 weeks, becoming progressively weaker, subject to frequent leprous fever and outcroppings of evanescent nodules and some tubercles of the permanent type, and almost complete loss of appetite. After four injections, was considerably improved and regained some strength, showed marked reduction in fever, and had comparatively few new evanescent tubercles; was discharged from the infirmary and returned to his quarters. At the end of five months, was much stronger and had made considerable improvement in his general health and appearance; discontinued treatment voluntarily. Eight

* Died 14 months after treatment was begun.

months after beginning treatment, again returned to infirmary, complaining of afternoon fever and malaise; condition subsequently became worse with, in addition, abdominal cramps, bloody diarrhea, and rectal tenesmus. Died four months after treatment was discontinued.

Case No. 10, male, American, 33 years of age, active advanced nodular type with ulcerating tubercles on face and limbs, marked pharyngitis and laryngitis from leprous ulcerations and consequent dysphagia and dysphonia, as well as a severe nephritis evidenced by a high albuminuria and low phenolsulfonephthalein output (20 per cent first hour, 10 per cent second hour). Had severe stomatitis from small doses (5 c. c.), and received but a total of 78 c. c. in five months. At the end of five months, appeared to be slightly improved, many ulcerations completely healed, apparently somewhat stronger, but had lost 6 pounds in weight, probably due to dysphagia. Further mercurochrome treatment discontinued, and patient became progressively worse, succumbing to his leprous infection 12 months after treatment was begun.

Case No. 12, male, negro, 39 years of age, active advanced nodular type, complicated with active advanced pulmonary tuberculosis, subject to daily attacks of chills and fever, successive outcroppings of evanescent tubercles, marked edema of the feet and hands, marked arthritis, and distressing night sweats. After four injections of 27 c. c. each, professed to feel better than he had for months. Chills and fever less marked, edema in hands and feet diminished, joint pains practically disappeared, skin on his forearms less indurated. Insisted that he had less cough at night and that the night sweats were less distressing. The dosage was reduced from 27 to 14 c. c. because of severe stomatitis. The subsequent course was a gradual return to his pretreatment state, it being evident that his progress was steadily downward. Treatment was discontinued after four months, and two months later he died.

One patient absconded from the hospital and his present condition is not reportable:

Case No. 42, male, American, 42 years of age, active moderately advanced nodular type, in excellent general health; had a large infiltrated leprous plaque on forehead and numerous small ones on face and trunk. Received treatment regularly for three months, during which time the inflamation in his leprous plaques decreased. General condition remained excellent. Left hospital without official leave.

COMMENT

A very definite improvement was early apparent in some of the secondary lesions found in nodular and mixed types. Ulcerating nodules became clean, granulated, and healed, leaving smooth cicatrices. Trophic ulcers responded more slowly, but definitely improved. Occasionally soft nodules showed a very slow tendency to absorption; fibrous nodules were not noticeably improved. Symptoms referable solely to advanced anesthetic leprosy were not appreciably affected. Two cases of early maculo-anæsthetic leprosy were markedly improved as far as macules are concerned. It should be noted that in early maculo-anæsthetic leprosy, macules often improve and even temporarily disappear without treatment.

An interesting phenomenon occurred in approximately one-half of the patients who were accustomed to occasional unannounced attacks of leprous fever accompanied by outcroppings of evanescent tubercles. It was noted that, sometimes after the first injection and frequently after the second or third intravenous injection of mercurochrome, the course of the febrile reaction was apparently favorably modified by a sharp decline in the temperature within 12 hours and by the failure, or almost complete failure, of evanescent nodules to appear. In a few instances, febrile reactions have not recurred. In many, however, after a period of two or three months' treatment, leprous fever and evanescent tubercles reappeared, although they were rarely so severe as before treatment was started.

Following the first few injections, the majority of patients claimed a distinct improvement in general health and exhibited satisfactory improvement in certain leprous lesions and also in lesions due to secondary infections. This improvement continued for several months; subsequently, improvement was less rapid.

Leprous patients in this experiment suffering from active pulmonary tuberculosis have not exhibited progressive improvement of both diseases; certain leprous manifestations have improved while the pulmonary tuberculosis has apparently been aggravated by mercurochrome.

As a continuance of the study of mercurial preparations, and in addition to this experiment, which is being continued, a selected number of patients are being given further treatment by the intravenous administration of mercurophen and metaphen, a report of which will be made subsequently.

CONCLUSIONS

1. Mercurochrome soluble 220 has not proved to be specific for leprosy.

2. Mercurochrome soluble 220 has been helpful in checking rapid retrogression in leprosy.

3. Mercurochrome soluble 220 has been of value in the treatment of ulcers, the result of disintegrating tubercles.

4. Mercurochrome soluble 220 has been helpful in the healing of neuro-trophic ulcers.

5. Mercurochrome has not been helpful in checking the unfavorable progress of pulmonary tuberculosis in lepers; on the contrary, this complication was apparently aggravated.

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TABULATED DATA

Summary of results

Result	Active advanced	Active moderately advanced	Active early	Inactive early	Total	Per cent
Markedly improved	9	6	1	0	16	36.4
Moderately improved	1	3	2	0	6	13.6
Slightly improved	3	2	1	0	6	13.6
Unchanged	3	1	1	2	7	15.9
Slightly worse	0	2	0	0	2	4.5
Moderately worse	2	0	1	0	3	6.8
Died	2	1	0	0	3	6.8
Absconded	0	1	0	0	1	2.3
Total	20	16	6	2	44	99.9
Per cent	45.4	36.4	13.6	4.5	99.9	

Tabulation of cases

Case No.	Age	Sex	Type of leprosy	State of progress [1]	Complications [2]	Number of injections	Average dose	Weight change	Results [3]
							C. C.	Pounds	
1	25	M	Mixed	A. M. A.		28	14	+3	Ma. I.
2	56	M	do	A. A.		22	15.5	+16	Ma. I.
3	26	M	Nodular	A. A.	Lues-TB.	20	15	−15	Mo. W.[4]
4	30	M	Mixed	A. M. A.		24	16	−4	Sl. W.
5	46	M	do	A. A.		22	7.5	+28	Ma. I.
6	26	M	do	A. M. A.		27	15.7	−5	Ma. I.
7	31	M	do	A. A.	Lues	11	19	+8	Ma. I.
8	26	M	Nodular	A. A.		16	18	+2	Sl. I.
9	25	M	do	A. M. A.	Lues-TB.	15	15.2		Died.
10	33	M	do	A. A.	Neph.	13	6		Died.
11	24	F	do	A. M. A.		22	12.8	0	Ma. I.
12	29	M	do	A. A.	TB	17	16		Died.
13	44	M	Mixed	A. A.		21	20	+20	Ma. I.
14	32	M	do	A. A.		15	17.5	−9	Ma. I.
15	25	M	Nodular	A. M. A.		20	16.3	+2	Mo. I.
16	48	M	Mixed	A. A.		27	6.3	−2	Ma. I.
17	24	M	Nodular	A. A.		12	16.5	+6	Mo. I.
18	33	M	Mixed	A. M. A.		7	20	−14	U.
19	20	M	Nodular	A. M. A.		28	15.4	+20	Mo. I.
20	25	M	do	A. A.		22	15.4	+3	U.
21	29	M	Mixed	A. E.		21	17	+2	U.
22	22	M	do	A. A.		13	16	−1	U.
23	30	F	do	A. M. A.		13	16.5	−12	Ma. I.
24	42	F	do	A. A.		8	17.4	+10	Mo. W.
25	16	M	do	A. E.	Inf. par.	18	19	−2	Mo. I.
26	67	M	Nodular	A. M. A.		35	12.9	+1	Ma. I.
27	29	F	Mixed	A. A.		31	9.4	+22	Ma. I.
28	44	M	do	A. A.	Neph.	14	3.4	−13	U.
29	30	F	Anæsthetic	A. E.		21	14.7	+21	Ma. I.
30	28	M	Nodular	A. M. A.	Lues	16	18.9	+4	Mo. I.
31	41	F	Mixed	A. A.	do	26	16.2	−12	Ma. I.
32	51	M	Anæsthetic	A. M. A.	TB	14	16.8	−8	Sl. W.
33	26	M	do	A. E.		10	17	+2	Sl. I.
34	44	F	do	I. E.		10	21.6	−8	U.
35	28	M	Mixed	A. A.	Dem. pr.	11	13.2	+2	Ma. I.
36	26	M	Anæsthetic	I. E.		23	12.9	−3	U.
37	26	F	Mixed	A. M. A.	Lues	23	12.5	−3	Ma. I.
38	32	M	Anæsthetic	A. E.	TB	14	17.1	−7	Mo. W.
39	24	F	Mixed	A. M. A.		11	14	−2	Sl. I.
40	14	M	Nodular	A. E.		32	9.6	+17	Mo. I.
41	57	M	Mixed	A. M. A.		15	15	−2	Sl. I.
42	42	M	Nodular	A. M. A.		13	17	(?)	Absc.
43	26	M	Mixed	A. A.	Dem. pr.	9	15	0	Sl. I.
44	31	M	do	A. A.		11	6.1	+3	Sl. I.

[1] A. E., active early; I. E., inactive early; A. M. A., active, moderately advanced; A. A., active, advanced.
[2] TB., tuberculosis; Neph., nephritis; Inf. par., infantile paralysis; Dem. pr., dementia precox.
[3] Absc., absconded; Ma. I., markedly improved; Mo. I., moderately improved; Sl. I. slightly improved; U., unchanged; Sl. W., slightly worse; Mo. W., moderately worse.
[4] Died after 14 months' treatment.

DESTRUCTION OF COCKROACHES AND DEVITALIZATION OF THEIR EGGS BY CYANOGEN-CHLORIDE MIXTURE

By C. E. Rice, Assistant Surgeon, United States Public Health Service

Most persons who have gone to sea or who have worked about ships know that the most common form of animal life on a ship is the cockroach. Of the four domestic species of roaches the most important as regards ship infestation is the croton bug, or German cockroach (*Blatella germanica*). Two other species are often seen, much larger than the croton bug, the *Periplaneta americana* and *Periplaneta australasia*. These last two are most often seen on ships touching Central American ports and the South Sea Islands. However, these

are never as numerous and never found on as many ships of the Pacific as the croton bug.

The croton bug is recognized by its small size, one-half inch or less in length, and two longitudinal black stripes on the dorsal surface of the pronotum.

The roaches are found most often and in greatest numbers around galleys, storerooms, dining rooms, and pantries of ships. After fumigation, as many as 300 dead croton bugs have been counted on the top of a meat block 3 feet square.

While the United States Public Health Service is primarily interested in the killing of rats in ship fumigation, the ships' officers are usually primarily interested in the efficiency of the fumigation in eradicating cockroaches. Medical officers on Army and Navy transports have developed a very critical attitude toward the fumigation of their ships, and usually judge the effectiveness of the fumigation by the scarcity of live cockroaches after the ship is cleared of gas. It is quite common to hear the wish expressed that a second fumigation could be done in a week or so in order to kill the young of eggs that have hatched since the first fumigation.

Agents of freighters and passenger ships very often request the fumigation of their ships for cockroach eradication in spite of the fact that the cost is considerable.

In 1921 Mr. I. E. Neifert and Mr. G. L. Garrison, of the Bureau of Chemistry, Department of Agriculture, in Bulletin No. 893, reported that cockroaches and the egg pods of roaches were killed by exposure to hydrocyanic and cyanogen-chloride gas. The tests were made on the German cockroach. The experiments were carried out under ideal laboratory conditions, and concentrations of gas were used much greater than the concentration used by the United States Public Health Service in ship fumigation.

It was thought of considerable importance to determine whether cyanogen-chloride gas killed the eggs of roaches on ships undergoing routine fumigation. These observations were made only on the *Blatella germanica* and on the eggs of the same roach.

Using the amounts of chemicals as called for by the United States quarantine regulations (4 ounces of sodium cyanide to each 1,000 cubic feet of space; 17 ounces of HCl; and 3 ounces of sodium chlorate, with exposures from two to four hours) in compartments that were tight, or could be made tight, all roaches were invariably killed unless too well protected by cover. Of 405 female croton bugs subjected to such exposure, collected from 24 different ships, none ever revived. In one galley, in a corner near a door through which the roaches had evidently intended to escape, was found a heap of croton bugs. This heap was somewhat pyramidal in shape,

with a depth of 2 inches. Some of those on the bottom that had been protected by those on top were able to move about slowly and erratically. Twenty of those able so to move about were collected, and these recovered. The exposure in this case had been two hours. Doubling the time of exposure would have increased the efficiency of the gas. In this galley there had been some leakage of gas through the stoves and stovepipe, as the funnel had not been covered.

From August, 1924, to February, 1925, 449 female croton bugs with egg sacs attached were observed for the effect of CNCl on the hatching of the eggs, some as controls, but the majority killed by cyanogen-chloride gas in concentration as called for by the United States Quarantine Regulations and described above. Some of the controls were captured while dormant from cold and some while stunned by exposure to the gas for only 20 to 30 minutes.

On August 10, five living female roaches with egg sacs attached were secured. On the same ship 30 dead females with egg sacs were collected after a two-hour exposure to CNCl. Cardboard was placed in the bottom of wide-mouthed bottles and moistened each day. Both the dead and living roaches were kept in such bottles. All the eggs of the living roaches hatched in from one to six weeks. The eggs remained attached until just before hatching in most cases, but in some instances they remained attached during and after hatching. The eggs attached to the dead roaches were observed for two months and only those of one roach hatched, but the young roaches died shortly after emerging.

On September 14, 15 living females were secured and the eggs of 11 hatched within four weeks. Of 20 dead secured at this time, no eggs hatched. These roaches were killed by a two-hour exposure to CNCl. On November 11 five living females were secured and the eggs of four hatched within four weeks. Twenty dead females secured on this ship were kept two months and no eggs hatched. These had been subjected to a two-hour exposure. On November 12 four living females were caught and the eggs of all hatched within four weeks. Twenty dead were secured on this ship and no eggs hatched. These roaches were killed by two hours' exposure to CNCl. On February 10, 15 live females were taken and the eggs of 12 hatched within one month. Of 40 dead females secured on this ship, no eggs hatched. These were killed by two hours' exposure to CNCl. Two hundred and seventy-five more females with egg sacs attached and dead from exposure to CNCl for from two to four hours were observed without any control groups. Of these only one egg hatched. The majority of these 275 roaches were killed by a two-hour exposure to CNCl. The fact that the croton bug carries its egg sac up to the time of hatching is important. If it attempted to hide its egg some

time before hatching, as the *americana* is reported to do, then it would be impossible to get the gas to some eggs.

The concentrations as reported by Neifert and Garrison in Bulletin No. 893 of the Department of Agriculture are much greater than the concentration of gas called for by the United States Quarantine Regulations; they used a 2 per cent concentration against roach eggs. The concentration developed by 4 ounces of sodium cyanide in conjunction with sodium chlorate and hydrochloric acid to each 1,000 cubic feet is less than one-tenth of 1 per cent. If a 2 per cent concentration were necessary, the cost of fumigating a ship by such a process would be prohibitive.

CONCLUSIONS

1. The cockroach is the most common form of life on ships.

2. Of all cockroaches on ships, the German cockroach, or croton bug (*Blatella germanica*), greatly outnumbers all others.

3. With a ship properly closed and sealed, the cyanogen-chloride and hydrocyanic gas developed by 4 ounces of sodium cyanide to each 1,000 cubic feet, in conjunction with sodium chlorate and hydrochloric acid, will kill practically all croton bugs in a two-hour exposure. A four-hour exposure would be more efficient, as the gas would then reach the roaches that were too well protected by cover to be reached by a shorter exposure.

4. The same gas in the same time will kill the eggs of the croton bug unless they are too well protected.

5. If a second fumigation is to follow the first for the purpose of killing the young that have hatched from eggs that escaped the first fumigation, at least two weeks should elapse, and, preferably, a period of six weeks, before the second fumigation.

SMALLPOX AND VACCINATION IN CONNECTICUT, 1923 AND 1924

During the years 1923 and 1924, 152 cases of smallpox with 6 deaths were reported in Connecticut. The State health department has supplied the following detailed information as to the vaccination history of the cases:

	Cases	Deaths
Vaccinated within 7 years	3	0
Vaccinated more than 7 years before onset	24	1
Never successfully vaccinated	96	5
Had smallpox previously	1	0
Vaccination history uncertain	3	0
Case records missing	25	0
Total	152	6

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Vaccination history of smallpox cases in Connecticut in 1923 and 1924

Ages in years	Vaccinated within 7 years		Vaccinated more than 7 years before onset		Never successfully vaccinated		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
0–4	0	0	0	0	6	1	6	1
5–9	0	0	0	0	15	0	15	0
10–14	0	0	0	0	15	1	15	1
15–19	1	0	0	0	19	0	20	0
20–24	0	0	1	0	11	0	12	0
25–29	0	0	1	0	11	2	12	2
30–34	0	0	7	0	6	0	13	0
35–39	0	0	2	0	3	0	5	0
40–44	0	0	0	0	7	1	7	1
45–49	0	0	5	0	2	0	7	0
50 and over	2	0	7	1	0	0	9	1
Age not given	0	0	1	0	1	0	2	0
Total	3	0	24	1	96	5	123	6

DEATH RATES IN A GROUP OF INSURED PERSONS

COMPARISON OF PRINCIPAL CAUSES OF DEATH, MAY AND JUNE, 1925, AND RATES FOR WHITE AND COLORED POLICYHOLDERS FOR THE FIRST SIX MONTHS OF 1923, 1924, AND 1925

The accompanying tables are taken from the Statistical Bulletin for July, 1925, published by the Metropolitan Life Insurance Co. They present the mortality experience of the industrial insurance department of the company for May and June, 1925, as compared with June and year 1924, and compare the death rates for white and colored policyholders for the first six months of the years 1923, 1924, and 1925. The rates are based on a strength of approximately 16,000,000 insured persons.

The health record for June for this group, as interpreted by the death rate, was unfavorable as compared with that for the five preceding months, with that for May, 1925, and with that for June, 1924. It is the first month this year to have higher rates than the corresponding month of last year; and instead of registering the usual seasonal decline, the rate for June was higher than that for May. The death rates per 1,000 for May and June for the two years are as follows: *1924*—May, 9.3; June, 9.0; *1925*—May, 8.8; June, 9.4. The June death rate this year exceeded that for any June since 1921.

The Bulletin attributes this unsatisfactory record largely to the protracted period of hot weather during the month, and does not interpret it as the beginning of a permanent break in the favorable health conditions which have prevailed so far during the year. It states:

A considerable number of deaths were definitely reported from sunstroke and excessive heat. In a much larger number of instances, effects of heat were certified as contributory factors in the deaths of persons from organic diseases. In hundreds of other cases, it is safe to say, excessive heat or humidity played

their parts, even though physicians made no mention of them in reporting causes of death.

Organic heart disease and chronic Bright's disease were two important causes of death showing considerable increases in June this year over the rates both for May of this year and for June of last year.

Death rates (annual basis) for principal causes, per 100,000 lives exposed, May and June, 1925, and June and year, 1924

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death	Death rate per 100,000 lives exposed [1]			
	June, 1925	May, 1925	June, 1924	Year 1924 [2]
Total, all causes	941.0	884.2	928.8	907.5
Typhoid fever	3.0	2.0	4.1	4.4
Measles	7.1	5.0	8.0	7.2
Scarlet fever	3.4	4.6	5.1	4.4
Whooping cough	8.9	7.9	7.4	7.4
Diphtheria	8.2	10.4	9.3	13.2
Influenza	12.9	25.0	11.6	16.0
Tuberculosis (all forms)	106.7	102.6	115.1	104.5
Tuberculosis of respiratory system	91.9	87.6	102.9	92.6
Cancer	68.8	65.9	76.0	70.4
Diabetes mellitus	15.0	14.1	14.0	14.9
Cerebral hemorrhage	51.4	49.6	58.2	60.2
Organic diseases of heart	134.7	124.3	131.5	123.7
Pneumonia (all forms)	74.4	94.7	84.1	88.8
Other respiratory diseases	12.0	14.2	14.0	13.9
Diarrhea and enteritis	31.0	19.0	24.3	32.2
Bright's disease (chronic nephritis)	73.1	66.7	65.7	65.5
Puerperal state	17.3	15.4	15.2	16.8
Suicides	6.5	5.3	7.8	7.2
Homicides	7.1	6.7	5.7	7.1
Other external causes (excluding suicides and homicides)	88.6	55.6	63.1	62.7
Traumatism by automobile	15.9	14.1	16.6	15.7
All other causes	210.8	195.1	208.4	187.0

[1] All figures include infants insured under one year of age.
[2] Based on provisional estimate of lives exposed to risk in 1924.

MORTALITY RECORD FOR THE FIRST SIX MONTHS OF 1925

The death rate for the white industrial policyholders of the company for the first six months of 1925 (8.7 per 1,000) is stated to be a record low rate for the first half year. The rate for the colored (16.2 per 1,000) is not so favorable (16.0 per 1,000 in 1924, and 15.9 in 1923).

The continued decline in the tuberculosis death rate is credited with being the most important single item in bringing about this excellent record for the first half-year period. Both races shared in the decline for this disease, although the decrease in the colored rate was much smaller than that in the rate for the white persons. This drop in tuberculosis mortality is not shown, however, in the rate for "other forms of tuberculosis," which has registered, on the contrary, a definite increase during the past three years amounting to 25 per cent in two years for the white policyholders and to 47 per cent for the colored. It has not yet been determined for what organs this increase is being registered.

The death rate for the epidemic diseases of childhood—measles, scarlet fever, whooping cough, and diphtheria—as a group dropped 35 per cent from the figure for 1924 for the white persons, each disease registering a decrease. Among the colored, however, the rate increased slightly for three of these diseases—scarlet fever, whooping cough, and diphtheria.

Infantile diarrhea also showed improvement among the white children as contrasted with a rise in the rate among the colored.

The combined death rate from the principal "degenerative diseases" —heart disease, chronic Bright's disease, and cerebral hemorrhage— shows a decline among the white persons of this group, although the rates for cardiac conditions and nephritis are slightly higher than for 1924; and here again the rate for the colored is less favorable in comparison with that for the white policyholders.

The death rate for diseases incident to pregnancy and childbirth shows a considerable reduction in the first half year of 1925 from that for the corresponding period of 1924; and this decrease applies to both white and colored women. The death rate for puerperal septicemia, however, has been registering an upward tendency since 1923 among the colored women of this group, the rate for the first six months of 1925 being 23 per cent higher than that for the corresponding period of 1923, and 14 per cent above that for 1924.

The cancer death rate shows no significant change.

The death rate for diabetes again registers an increase. The rise is slight, but at this time last year a decline was being recorded by this disease.

Alcoholism caused 230 deaths during the first six months of 1925 (2.8 per 100,000) as compared with 236 deaths for the corresponding period of 1924 (3 per 100,000). Cirrhosis of the liver rose from 475 deaths in 1924 to 548 in 1925 (from 6 per 100,000 to 6.7).

The homicide rate shows a sharp increase among the white policyholders and a slight rise among the colored.

Automobile fatalities continue to show an increasing rate in spite of the various agencies actively interested in promoting public safety.

Death rates (annual basis) per 100,000 persons exposed, first six months of 1923, 1924, and 1925, for principal causes of death, compared for white and colored policyholders

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death	Death rates per 100,000 persons exposed					
	White			Colored		
	January-June, 1925	January-June, 1924	January-June, 1923	January-June, 1925	January-June, 1924	January-June, 1923
All causes of death	874.7	904.5	958.1	1,619.5	1,596.6	1,585.0
Typhoid fever	2.3	2.6	3.2	6.3	5.5	6.0
Measles	4.3	13.3	14.4	3.2	8.4	13.0
Scarlet fever	5.3	6.8	6.5	1.2	1.0	1.3
Whooping cough	7.0	7.7	7.1	13.8	13.4	10.0
Diphtheria and croup	12.5	16.7	18.2	5.4	5.0	6.4
Influenza	28.4	19.6	48.4	71.6	53.9	100.5
Meningococcus meningitis	1.0	.8	.7	.7	1.1	.7
Tuberculosis, all forms	87.0	96.5	104.7	240.1	253.0	256.7
Tuberculosis of respiratory system	76.2	85.9	95.8	209.2	229.0	235.8
Tuberculosis of meninges, etc	5.3	5.8	4.5	9.2	7.4	6.0
Other forms of tuberculosis	5.5	4.8	4.4	21.8	16.6	14.8
Cancer	69.2	70.6	72.5	73.1	75.3	69.9
Diabetes	16.5	16.0	20.0	16.0	15.8	17.2
Cerebral hemorrhage; apoplexy	52.1	59.1	63.5	91.4	105.7	102.7
Organic diseases of the heart	125.3	123.9	137.2	233.0	219.9	218.6
Total respiratory diseases	115.4	122.7	121.4	239.9	249.4	223.6
Bronchitis	6.0	6.2	7.3	9.9	11.6	11.3
Bronchopneumonia	43.5	49.3	39.4	75.1	78.8	56.5
Pneumonia, lobar and undefined	57.7	58.1	65.6	139.9	145.5	143.2
Other diseases of respiratory system	8.3	9.1	9.1	15.0	13.6	12.7
Diarrhea and enteritis	19.4	20.9	11.0	27.2	19.2	12.0
Under 2 years	16.3	17.6	7.4	19.6	13.0	5.3
2 years and over	3.1	3.3	3.5	7.6	6.2	6.6
Acute nephritis	4.9	5.0	5.4	16.1	17.2	15.3
Chronic nephritis	66.1	64.8	71.9	132.5	118.4	120.9
Total puerperal state	16.7	17.6	19.1	25.6	27.5	24.4
Puerperal septicemia	6.4	6.7	7.4	11.6	10.2	9.4
Puerperal albuminuria and convulsions	3.7	4.6	4.2	5.7	7.4	5.6
Other diseases of puerperal state	6.6	6.3	7.5	8.3	9.9	9.5
Total external causes	69.3	66.5	67.9	110.3	103.5	101.4
Suicides	7.1	7.5	8.4	4.3	5.0	5.0
Homicides	3.4	2.6	3.2	33.1	32.3	30.0
Accidental and unspec. violence	58.8	56.3	56.3	72.9	66.2	66.4
Accidental drowning	4.5	4.9	4.8	5.2	4.5	2.7
Automobile accidents	13.3	12.9	12.3	11.3	12.0	10.7
All other and ill-defined causes of death	172.1	173.4	164.9	312.0	303.5	284.5

DEATHS DURING WEEK ENDING AUGUST 15, 1925

Summary of information received by telegraph from industrial insurance companies for week ended August 15, 1925, and corresponding week of 1924. (From the Weekly Health Index, August 18, 1925, issued by the Bureau of the Census, Department of Commerce)

	Week ended August 15, 1925	Corresponding week, 1924
Policies in force	60,761,269	56,725,015
Number of death claims	9,806	8,803
Death claims per 1,000 policies in force, annual rate	8.4	8.1

Deaths from all causes in certain large cities of the United States during the week ended August 15, 1925, infant mortality, annual death rate, and comparison with corresponding week of 1924. (From the Weekly Health Index, August 18, 1925, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Aug. 15, 1925		Annual death rate per 1,000 corresponding week, 1924	Deaths under 1 year		Infant mortality rate week ended Aug. 15, 1925 [2]
	Total deaths	Death rate [1]		Week ended Aug. 15, 1925	Corresponding week, 1924	
Total (67 cities)	6,071	11.3	[3] 10.3	879	[3] 744	[4] 72
Akron	32			7	5	78
Albany [5]	29	12.6	10.1	5	4	109
Atlanta	86			23	14	
Baltimore [5]	184	12.0	11.8	37	30	111
Birmingham	47	11.9	13.8	7	11	
Boston	195	13.0	11.6	23	26	61
Bridgeport	17			4	1	64
Buffalo	127	12.0	10.1	19	26	77
Cambridge	12	5.6	7.5	2	1	34
Camden	30	12.2	13.6	7	10	111
Chicago [5]	600	10.4	8.7	87	71	77
Cincinnati	131	16.7	11.0	19	15	112
Cleveland	176	9.8	8.5	20	20	50
Columbus	71	13.2	8.0	13	5	119
Dallas	48	12.9	11.7	7	7	
Dayton	41	12.4	5.2	3	0	47
Denver	78	14.5	14.5	10	10	
Des Moines	23	8.0	9.7	0	5	0
Detroit	224			40	41	69
Duluth	20	9.4	5.8	2	2	43
El Paso	22	10.9	17.1	6	8	
Erie	24			2	1	39
Fall River [5]	17	7.3	10.8	4	5	58
Flint	25	10.0	7.6	5	1	79
Fort Worth	21	7.2	9.9	1	2	
Grand Rapids	28	9.6	7.7	3	1	47
Houston	33	10.4	10.8	4	4	
Indianapolis	88	12.8	11.1	14	19	100
Jersey City	67	11.1	11.9	10	10	71
Kansas City, Kans	23	9.7	10.7	2	5	42
Kansas City, Mo	101	14.3	12.5	17	13	
Los Angeles	186			19	16	52
Louisville	96	19.3	12.5	20	5	175
Lowell	30	13.4	9.5	7	3	122
Lynn	21	10.5	14.1	2	2	53
Memphis	40	12.0	19.4	8	14	
Milwaukee	86	8.9	7.5	17	9	79
Minneapolis	76	9.3	7.1	5	7	27
Nashville [5]	58	22.2	17.7	17	1	
New Bedford	20	7.7	6.3	6	4	100
New Haven	33	9.6	9.8	5	4	65
New Orleans	171	21.5	15.9	29	14	
New York	1,152	9.8	9.6	159	149	64
Bronx Borough	141	8.1	7.4	12	18	41
Brooklyn Borough	371	8.7	8.3	55	52	57
Manhattan Borough	479	11.1	11.4	63	64	66
Queens Borough	121	11.0	10.0	23	8	107
Richmond Borough	40	15.6	14.0	6	7	107
Newark, N. J	87	10.0	8.9	16	10	73
Norfolk	39			8	3	147
Oakland	45	9.2	8.4	3	1	35
Oklahoma City	19			2	9	
Omaha	46	11.3	9.0	6	4	62
Paterson	30	11.0	7.8	5	3	84
Philadelphia	444	11.7	11.8	78	60	99
Pittsburgh	157	13.0	10.2	21	15	70
Portland, Oreg	48	8.9	11.4	4	6	40
Providence	53	11.3	11.6	5	10	40
Richmond	68	19.0	12.2	16	9	191
Rochester	66	10.4	9.1	13	2	104
St. Louis	289	18.3	11.0	17	25	
St. Paul	43	9.1	11.5	3	3	25
Salt Lake City [5]	28	11.1	10.1	4	3	63

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1924. Cities left blank are not in the registration area for births.
[3] Data for 66 cities.
[4] Data for 62 cities.
[5] Deaths for week ended Friday, Aug. 14, 1925.

Deaths from all causes in certain large cities of the United States during the week ended August 15, 1925, infant mortality, annual death rate, and comparison with corresponding week of 1924. (From the Weekly Health Index, August 18, 1925, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Aug. 15, 1925		Annual death rate per 1,000 corresponding week, 1924	Deaths under 1 year		Infant mortality rate week ended Aug. 15, 1925
	Total deaths	Death rate		Week ended Aug. 15, 1925	Corresponding week, 1924	
San Antonio	48	12.6	13.6	14	7	----
San Diego	22	10.8	18.9	2	5	47
San Francisco	127	11.9	11.8	8	7	46
Schenectady	14	7.1	6.2	1	1	28
Seattle	55	----	----	3	6	29
Somerville	5	2.6	6.7	1	3	27
Spokane	22	10.5	6.5	1	0	22
Sprinfield, Mass	27	9.2	8.1	3	3	45
Syracuse	37	10.1	13.3	3	3	38
Tacoma	17	8.5	10.1	1	4	23
Toledo	48	8.7	10.8	7	10	63
Trenton	33	13.0	13.7	5	8	82
Utica	22	10.7	----	5	----	107
Washington, D. C	107	11.2	10.5	16	5	90
Waterbury	13	----	----	6	4	129
Wilmington, Del	22	9.4	10.9	7	3	159
Worcester	46	12.1	16.3	2	3	23
Yonkers	18	8.4	6.7	3	3	66
Youngstown	32	10.4	7.1	7	5	86

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 officer

Reports for Week Ended August 22, 1925

ALABAMA

	Cases
Actinomycosis	1
Cerebrospinal meningitis	2
Diphtheria	23
Influenza	1
Malaria	138
Measles	3
Mumps	6
Paratyphoid fever	1
Pellagra	5
Pneumonia	14
Poliomyelitis	4
Scarlet fever	13
Smallpox	15
Tetanus	1
Tuberculosis	44
Typhoid fever	63
Whooping cough	18

ARIZONA

Malaria	1
Poliomyelitis	4
Trachoma	1
Tuberculosis	2
Typhoid fever	10

ARKANSAS

Cerebrospinal meningitis	1
Chicken pox	5
Diphtheria	4
Hookworm disease	1
Influenza	9
Malaria	147
Measles	9
Mumps	11
Paratyphoid fever	2
Pellagra	8
Scarlet fever	8
Smallpox	3
Trachoma	2
Tuberculosis	6
Typhoid fever	84
Whooping cough	4

CALIFORNIA

	Cases
Cerebrospinal meningitis:	
Los Angeles	1
Los Angeles County	1
San Bernardino	1
San Francisco	1
Diphtheria	74
Influenza	6
Lethargic encephalitis—San Francisco	1
Measles	8
Poliomyelitis:	
Bakersfield	1
Berkeley	2
Inyo County	1
Lincoln	1
Lodi	1
Long Beach	1
Los Angeles	16
Merced County	2
Oakland	1
Pomona	1
Reedley	1
Richmond	1
Sacramento	2
San Francisco	1
Sonoma County	1
Scarlet fever	35
Smallpox:	
Los Angeles	9
Oakland	8
Scattering	16
Typhoid fever:	
Sacramento County	10
Scattering	35
Whooping cough	129

COLORADO

Diphtheria	12
Mumps	2
Pneumonia	1
Poliomyelitis	5
Scarlet fever	8
Tuberculosis	56
Typhoid fever	3
Whooping cough	15

CONNECTICUT

	Cases
Cerebrospinal meningitis	1
Chicken pox	4
Diphtheria	11
Dysentery (bacillary)	1
German measles	1
Measles	12
Mumps	5
Paratyphoid fever	1
Pneumonia (all forms)	13
Poliomyelitis	1
Scarlet fever	12
Tuberculosis (all forms)	30
Typhoid fever	7
Whooping cough	75

DELAWARE

Diphtheria	7
Malaria	2
Measles	2
Typhoid fever	4

FLORIDA

Cerebrospinal meningitis	1
Diphtheria	21
Influenza	1
Malaria	11
Measles	2
Mumps	6
Poliomyelitis	1
Scarlet fever	1
Tuberculosis	14
Typhoid fever	10
Typhus fever	1
Whooping cough	13

GEORGIA

Cerebrospinal meningitis	1
Chicken pox	2
Conjunctivitis	1
Diphtheria	12
Dysentery	8
Hookworm disease	8
Influenza	6
Malaria	93
Mumps	4
Pellagra	4
Pneumonia	16
Scabies	1
Scarlet fever	8
Septic sore throat	1
Tuberculosis	18
Typhoid fever	91
Typhus fever	1
Whooping cough	10

ILLINOIS

Cerebrospinal meningitis—Cook County	1
Diphtheria:	
Cook County	43
Scattering	16
Influenza	9
Lethargic encephalitis:	
Cook County	1
Ogle County	1
Measles	31
Pneumonia	75

ILLINOIS—continued

Poliomyelitis:	Cases
Cook County	7
Hancock County	1
Henry County	1
Iroquois County	1
Kane County	1
Mercer County	1
Peoria County	2
Scarlet fever:	
Cook County	27
Scattering	35
Smallpox	9
Tuberculosis	173
Typhoid fever	63
Whooping cough	155

INDIANA

Cerebrospinal meningitis	2
Chicken pox	7
Diphtheria	18
Influenza	25
Pneumonia	1
Poliomyelitis	1
Scarlet fever	19
Smallpox	3
Tuberculosis	46
Typhoid fever	62
Whooping cough	22

IOWA

Chicken pox	3
Diphtheria	6
Mumps	3
Poliomyelitis:	
Alker	1
Des Moines	1
Hesper	3
Highland	1
Stansgar	2
Scarlet fever	1
Smallpox	5
Whooping cough	5

KANSAS

Cerebrospinal meningitis—Meriden	1
Chicken pox	6
Diphtheria	10
Influenza	2
Measles	1
Mumps	9
Pneumonia	7
Poliomyelitis:	
Atchison	1
Glasco	1
Kansas City	2
Kirwin	1
Prescott	1
Topeka	3
Williamsburg	1
Scarlet fever	19
Smallpox	3
Tetanus	1
Tuberculosis	41
Typhoid fever	35
Whooping cough	61

LOUISIANA

	Cases
Diphtheria	7
Influenza	14
Malaria	49
Paratyphoid fever	1
Pneumonia	13
Poliomyelitis	2
Scarlet fever	4
Smallpox	8
Tuberculosis	31
Typhoid fever	84

MAINE

Diphtheria	8
Measles	5
Mumps	2
Scarlet fever	3
Tuberculosis	14
Typhoid fever	6
Whooping cough	1

MARYLAND [1]

Cerebrospinal meningitis	1
Chicken pox	6
Diphtheria	16
Dysentery	18
German measles	1
Influenza	1
Malaria	1
Measles	20
Mumps	5
Paratyphoid fever	5
Pneumonia (all forms)	19
Scarlet fever	8
Tetanus	2
Tuberculosis	108
Typhoid fever	60
Vincent's angina	1
Whooping cough	74

MASSACHUSETTS

Cerebrospinal meningitis	2
Chicken pox	15
Conjunctivitis (suppurative)	18
Diphtheria	43
German measles	21
Influenza	2
Lethargic encephalitis	1
Malaria	1
Measles	72
Mumps	11
Ophthalmia neonatorum	26
Pellagra	2
Pneumonia (lobar)	21
Poliomyelitis	9
Scarlet fever	39
Septic sore throat	1
Trichinosis	1
Tuberculosis (all forms)	117
Typhoid fever	21
Whooping cough	140

MICHIGAN

	Cases
Diphtheria	50
Measles	19
Pneumonia	31
Scarlet fever	59
Smallpox	1
Tuberculosis	30
Typhoid fever	16
Whooping cough	139

MINNESOTA

Anthrax	2
Cerebrospinal meningitis	3
Chicken pox	22
Diphtheria	49
Influenza	2
Measles	2
Pneumonia	1
Poliomyelitis	63
Scarlet fever	69
Tuberculosis	49
Typhoid fever	8
Whooping cough	36

MISSISSIPPI

Diphtheria	18
Poliomyelitis	2
Scarlet fever	3
Smallpox	4
Typhoid fever	45

MISSOURI

(Exclusive of Kansas City)

Chicken pox	1
Diphtheria	47
Influenza	41
Malaria	10
Mumps	11
Ophthalmia neonatorum	1
Pneumonia	1
Poliomyelitis	19
Scarlet fever	66
Smallpox	3
Tetanus	1
Trachoma	1
Tuberculosis	65
Typhoid fever	71
Whooping cough	55

MONTANA

Chicken pox	1
German measles	1
Mumps	8
Poliomyelitis:	
Bowdoin	1
Chinook	1
Twete	1
Scarlet fever	6
Smallpox	5
Tuberculosis	2
Tularaemia	1
Typhoid fever	8
Whooping cough	3

[1] Week ended Friday.

NEW JERSEY

	Cases
Chicken pox	15
Diphtheria	48
Measles	35
Pneumonia	18
Poliomyelitis	8
Scarlet fever	30
Typhoid fever	24
Whooping cough	92

NEW YORK
(Exclusive of New York City)

Diphtheria	44
Influenza	2
Lethargic encephalitis	4
Measles	52
Pneumonia	48
Poliomyelitis	27
Scarlet fever	54
Smallpox	1
Typhoid fever	49
Whooping cough	182

NORTH CAROLINA

Cerebrospinal meningitis	1
Chicken pox	9
Diphtheria	53
German measles	1
Measles	3
Poliomyelitis	4
Scarlet fever	15
Septic sore throat	1
Smallpox	12
Typhoid fever	52
Whooping cough	68

OKLAHOMA
(Exclusive of Oklahoma and Tulsa)

Chicken pox	1
Diphtheria	9
Influenza	16
Malaria	90
Measles	1
Mumps	1
Pellagra	6
Pneumonia	4
Poliomyelitis:	
McCurtain	1
Rabies	1
Scarlet fever	21
Smallpox	2
Typhoid fever:	
Leflore	23
McCurtain	8
Tulsa	9
Scattering	83
Whooping cough	7

OREGON

Chicken pox	5
Diphtheria	8
Measles	2
Mumps	3
Pneumonia	5
Scarlet fever	7
Smallpox	1
Tuberculosis	21
Typhoid fever	18
Whooping cough	6

SOUTH CAROLINA

	Cases
Dengue	1
Diphtheria	28
Influenza	52
Malaria	488
Measles	1
Poliomyelitis	7
Scarlet fever	12
Smallpox	8
Tuberculosis	70
Typhoid fever	102
Whooping cough	52

SOUTH DAKOTA

Diphtheria	1
Poliomyelitis	2
Scarlet fever	7
Typhoid fever	4

TEXAS

Diphtheria	18
Measles	1
Mumps	3
Paratyphoid fever	1
Pneumonia	2
Poliomyelitis	1
Scarlet fever	5
Smallpox	2
Tuberculosis	19
Typhoid fever	22
Typhus fever	1
Whooping cough	16

VERMONT

Chicken pox	4
Measles	3
Mumps	5
Scarlet fever	2
Whooping cough	4

VIRGINIA

Cerebrospinal meningitis—Wise County	1
Poliomyelitis—Prince Edward County	1

WASHINGTON

Chicken pox	9
Diphtheria	18
German measles	1
Measles	2
Mumps	6
Poliomyelitis:	
Pierce County	6
Seattle	2
Spokane	1
Scarlet fever	10
Smallpox	6
Tuberculosis	51
Typhoid fever	10
Whooping cough	31

WEST VIRGINIA

Diphtheria	6
Poliomyelitis—Wheeling	1
Scarlet fever	6
Smallpox	1
Typhoid fever:	
Morgantown	11
Scattering	8

WISCONSIN

Milwaukee:	Cases
Chicken pox	3
Diphtheria	3
German measles	2
Measles	2
Mumps	3
Pneumonia	5
Scarlet fever	3
Tuberculosis	15
Whooping cough	78
Scattering:	
Cerebrospinal meningitis	1
Chicken pox	10
Diphtheria	34
German measles	9
Influenza	1
Measles	77
Mumps	13

WISCONSIN—continued

Scattering—Continued	Cases
Pneumonia	3
Poliomyelitis	9
Scarlet fever	44
Smallpox	8
Tuberculosis	37
Typhoid fever	9
Whooping cough	119

WYOMING

Chicken pox	1
Diphtheria	1
Mumps	2
Rocky Mountain spotted fever	1
Scarlet fever	2
Typhoid fever	2
Whooping cough	4

Reports for Week Ended August 15, 1925

DISTRICT OF COLUMBIA

	Cases
Chicken pox	3
Diphtheria	11
Measles	3
Pneumonia	15
Scarlet fever	7
Tuberculosis	17
Typhoid fever	4
Whooping cough	15

NEBRASKA

Chicken pox	1
Diphtheria	2
Measles	3
Poliomyelitis	7
Scarlet fever	3
Smallpox	3
Tuberculosis	1
Typhoid fever	1
Whooping cough	6

NORTH DAKOTA

Cerebrospinal meningitis	1
Chicken pox	2

NORTH DAKOTA—continued

	Cases
Diphtheria	2
Measles	3
Mumps	4
Poliomyelitis	9
Scarlet fever	10
Smallpox	3
Tuberculosis	5
Typhoid fever	1
Whooping cough	54

SOUTH CAROLINA

Dengue	1
Diphtheria	44
Influenza	56
Malaria	428
Measles	1
Poliomyelitis	10
Scarlet fever	13
Smallpox	16
Tuberculosis	75
Typhoid fever	107
Whooping cough	91

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
JUNE, 1925										
Montana	-------	12	12	-------	6	-------	3	73	17	4
JULY, 1925										
Alabama	3	34	14	480	-------	93	11	73	80	339
Illinois	3	287	51	20	982	-------	26	351	46	217
Maryland	1	67	22	7	158	1	6	54	1	101
Michigan	-------	203	9	2	456	-------	11	434	43	69
Minnesota	3	396	6	-------	22	-------	109	335	23	33
New Jersey	10	268	7	3	533	-------	43	185	11	104
New York	22	868	35	19	1,400	-------	120	496	5	284
North Carolina	-------	112	-------	-------	15	-------	12	42	56	303
North Dakota	3	5	1	-------	1	-------	18	49	1	1
Ohio	5	211	23	4	507	0	11	303	180	125
Oklahoma [1]	5	12	51	182	5	47	6	36	34	514
West Virginia	1	33	28	-------	65	1	4	44	30	111

[1] Tulsa City and Oklahoma City not included.

Number of Cases of Certain Communicable Diseases Reported for the Month of May, 1925, by State Health Officers

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	180	38	59	189	153	511	340	147	216
Arizona	24	6	396	123	23	3	80	12	27
Arkansas	58	9	110	102	12	18	[1] 51	44	101
California	995	430	298	1,442	511	536	818	39	1,749
Colorado	130	125	48	289	122	2	[1] 167	10	64
Connecticut	200	103	985	85	364	2	117	19	481
Delaware	2	10	30	22	18	4	18	1	4
District of Columbia	47	65	151	-------	92	4	107	9	72
Florida	64	31	7	247	12	24	152	59	69
Georgia	236	34	88	389	25	128	198	155	277
Idaho	-------	5	-------	-------	12	-------	-------	4	-------
Illinois	934	370	6,237	767	1,682	150	1,151	71	1,184
Indiana	-------	84	-------	-------	703	-------	-------	39	-------
Iowa	93	68	38	44	112	69	1	(2)	34
Kansas	290	51	58	586	258	18	184	11	232
Kentucky [3]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Louisiana	49	39	10	2	48	50	[1] 203	213	74
Maine	111	13	24	463	90	0	54	10	26
Maryland	440	114	145	344	224	4	321	21	512
Massachusetts	558	351	3,756	300	996	1	778	37	664
Michigan	565	239	2,331	280	1,321	86	524	33	759
Minnesota	443	341	189	-------	1,033	83	286	13	156
Mississippi	540	47	547	1,619	11	102	351	319	933
Missouri	333	330	142	287	799	93	362	20	165
Montana	30	21	66	87	171	17	54	13	50
Nebraska	-------	23	-------	-------	57	-------	-------	2	-------
Nevada [4]	-------	-------	-------	-------	-------	-------	-------	-------	-------
New Hampshire [4]	-------	-------	-------	-------	-------	-------	-------	-------	-------
New Jersey	644	300	2,106	-------	985	37	425	27	913
New Mexico	14	12	42	48	28	6	149	3	30
New York	1,767	1,573	3,657	1,021	2,399	31	1,831	140	1,383
North Carolina	339	83	116	-------	80	253	-------	41	458
North Dakota	41	20	13	48	166	19	10	2	113
Ohio	913	329	1,976	327	1,569	457	668	57	849
Oklahoma	88	-------	18	71	145	54	210	85	179
Oregon	103	116	13	83	85	52	90	7	106
Pennsylvania	1,308	880	8,159	1,575	2,358	37	551	74	1,092
Rhode Island	-------	29	-------	-------	75	11	-------	3	-------
South Carolina	24	119	33	-------	32	133	250	223	802
South Dakota	12	18	12	4	148	20	9	3	22
Tennessee [5]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Texas [3]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Utah	392	57	69	165	39	-------	[1] 15	15	386
Vermont	88	12	52	224	41	-------	[1] 27	-------	28
Virginia	571	82	1,248	-------	72	45	[1] 279	148	842
Washington	377	87	25	375	121	192	145	8	617
West Virginia	120	48	628	-------	210	85	60	35	172
Wisconsin	555	140	1,718	777	541	243	159	9	451
Wyoming	37	21	23	32	18	1	[1] 2	-------	74

[1] Pulmonary.
[2] Reports not required by law.
[3] Reports received weekly.
[4] Reports received annually.
[5] Reports not received at time of going to press

Case Rates per 1,000 Population (annual basis) for the Month of May, 1925

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Alabama	0.86	0.18	0.28	0.90	0.73	2.44	1.62	0.70	1.03
Arizona	.69	.17	11.44	3.55	.66	.09	2.31	.35	.78
Arkansas	.37	.06	.70	.65	.08	.11	[1] .32	.28	.64
California	2.91	1.26	.87	4.22	1.50	1.57	2.40	.11	5.12
Colorado	1.50	1.44	.55	3.34	1.41	.02	1.93	.12	.74
Connecticut	1.54	.79	7.57	.65	2.80	.02	.90	.15	3.70
Delaware	.10	.50	1.50	1.10	.90	.20	.90	.05	.20
District of Columbia	1.11	1.54	3.57	-------	2.18	.09	2.53	.21	1.70
Florida	69	.33	.08	2.67	.13	.26	1.64	.64	.74
Georgia	.91	.13	.34	1.50	.10	.49	.76	.60	1.07
Idaho	-------	.12	-------	-------	.29	-------	-------	.10	-------
Illinois	1.58	.63	10.54	1.30	2.84	.25	1.95	.12	2.00
Indiana	-------	.32	-------	-------	2.70	-------	-------	.15	-------
Iowa	.44	.32	.18	.21	.53	.32	.00	[2]	.16
Kansas	1.88	.33	.38	3.80	1.67	.12	1.19	.07	1.51
Kentucky [3]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Louisiana	.31	.24	.06	.01	.30	.31	1.27	1.33	.46
Maine	1.67	.20	.36	6.97	1.35	.00	.81	.15	.39
Maryland	3.37	.87	1.11	2.64	1.72	.03	2.46	.16	3.92
Massachusetts	1.59	1.00	10.72	.86	2.84	.00	2.22	.11	1.89
Michigan	1.60	.68	6.61	.79	3.74	.24	1.49	.09	2.15
Minnesota	2.03	1.57	.87	-------	4.74	.38	1.31	.06	.72
Mississippi	3.55	.31	3.60	10.64	.07	.67	2.31	2.10	6.13
Missouri	1.13	1.12	.48	.97	2.71	.32	1.23	.07	.56
Montana	.55	.38	1.20	1.58	3.11	.31	.98	.24	.91
Nebraska	-------	.20	-------	-------	.50	-------	-------	.02	-------
Nevada [4]	-------	-------	-------	-------	-------	-------	-------	-------	-------
New Hampshire [4]	-------	-------	-------	-------	-------	-------	-------	-------	-------
New Jersey	2.16	1.01	7.07	-------	3.31	.12	1.43	.09	3.07
New Mexico	.43	.37	1.30	1.49	.87	.19	4.63	.09	.93
New York	1.87	1.67	3.88	1.08	2.54	.03	1.94	.15	1.47
North Carolina	1.45	.35	.50	-------	.34	1.08	-------	.17	1.95
North Dakota	.70	.34	.22	.82	2.85	.33	.17	.03	1.94
Ohio	1.70	.61	3.68	.61	2.92	.85	1.24	.11	1.58
Oklahoma	.46	-------	.09	.37	.76	.28	1.10	.45	.94
Oregon	1.43	1.61	.18	1.16	1.18	.72	1.25	.10	1.48
Pennsylvania	1.65	1.11	10.31	1.99	2.98	.05	.70	.09	1.38
Rhode Island	-------	.53	-------	-------	1.38	.20	-------	.06	-------
South Carolina	.16	.79	.22	-------	.21	.88	1.65	1.48	5.31
South Dakota	.21	.32	.21	.07	2.62	.35	.16	.05	.39
Tennessee [5]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Texas [3]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Utah	9.37	1.36	1.65	3.94	.93	-------	[1] .36	.36	9.23
Vermont	2.94	.40	1.74	7.48	1.37	-------	[1] .90	-------	.94
Virginia	2.74	.39	6.00	-------	.35	.22	[1] 1.34	.71	4.05
Washington	3.00	.69	.20	2.99	.96	1.53	1.15	.06	4.91
West Virginia	.88	.35	4.62	-------	1.54	.63	.44	.26	1.26
Wisconsin	2.33	.59	7.22	3.27	2.27	1.02	.67	.04	1.90
Wyoming	1.96	1.11	1.22	1.70	.96	.05	.11	-------	3.93

[1] Pulmonary.
[2] Reports not required by law.
[3] Reports received weekly.
[4] Reports received annually.
[5] Reports not received at time of going to press.

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of July, 1925, to other State health departments by departments of health of certain States

Referred by—	Poliomyelitis	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever
Illinois	3	1	3	1	14
Minnesota	2	-------	-------	52	-------
New York	-------	1	1	-------	2
Washington	-------	-------	1	-------	-------

PLAGUE-ERADICATIVE MEASURES IN THE UNITED STATES

The following items were taken from the reports of plague-eradicative measures from the cities named:

Los Angeles, Calif.

Week ended Aug. 8, 1925:	
Number of rats trapped	2,289
Number of rats found plague infected	0
Number of squirrels examined	917
Number of squirrels found plague infected	0
Number of mice trapped	2,144
Number of mice found plague infected	0

Date of discovery of last plague-infected rodent, Aug. 13, 1925.
Date of last human case, Jan. 15, 1925.

Oakland, Calif.

(Including other East Bay communities)

Week ended Aug. 8, 1925:	
Number of rats trapped	1,230
Number of rats found to be plague infected	0
Totals:	
Number of rats trapped Jan. 1 to Aug. 8, 1925	63,129
Number of rats found to be plague infected	21
Number of squirrels examined May 1 to Aug. 1, 1925	7,277
Number of squirrels found to be plague infected	0

Date of discovery of last plague-infected rat, Mar. 4, 1925.
Date of last human case, Sept. 10, 1919.

New Orleans, La.

Week ended Aug. 8, 1925:	
Number of vessels inspected	25
Number of inspections made	32
Number of vessels fumigated with cyanide gas	6
Number of rodents examined for plague	3,270
Number of rodents found to be plague infected	0
Totals, Dec. 5, 1924, to Aug. 8, 1925:	
Number of rodents examined for plague	154,235
Number of rodents found to be plague infected	12

Date of discovery of last plague-infected rat, Jan. 17, 1925.
Date of last human case occurring in New Orleans, Aug. 20, 1920.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended August 8, 1925, 34 States reported 839 cases of diphtheria. For the week ended August 9, 1924, the same States reported 1,025 cases of this disease. One hundred cities, situated in all parts of the country and having an aggregate population of nearly 28,700,000, reported 476 cases of diphtheria for the week ended August 8, 1925. Last year for the corresponding week they reported 537 cases. The estimated expectancy for these cities

was 570 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty-two States reported 586 cases of measles for the week ended August 8, 1925, and 698 cases of this disease for the week ended August 9, 1924. One hundred cities reported 293 cases of measles for the week this year, and 252 cases last year.

Poliomyelitis.[1]—The health officers of 35 States reported 277 cases of poliomyelitis for the week ended August 8, 1925. The same States reported 100 cases for the week ended August 9, 1924.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-four States—this year, 747 cases; last year, 852 cases; 100 cities—this year, 291 cases; last year, 356 cases; estimated expectancy, 230 cases.

Smallpox.—For the week ended August 8, 1925, 34 States reported 202 cases of smallpox. Last year, for the corresponding week, they reported 323 cases. One hundred cities reported smallpox for the week as follows: 1925, 50 cases; 1924, 106 cases; estimated expectancy, 38 cases. One death from smallpox was reported by these cities for the week this year—at Los Angeles, Calif.

Typhoid fever.—One thousand one hundred and twenty-eight cases of typhoid fever were reported for the week ended August 8, 1925, by 34 States. For the corresponding week of 1924 the same States reported 761 cases. One hundred cities reported 226 cases of typhoid fever for the week this year, and 248 cases for the corresponding week last year. The estimated expectancy for these cities was 212 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia (combined) were reported for the week by 100 cities as follows: 1925, 315 deaths; 1924, 275 deaths.

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[1] Figures given in Public Health Reports Aug. 21, 1925, page 1774, are erroneous. The item should have read as follows: "The health officers of 35 States reported 221 cases of poliomyelitis for the week ended Aug. 1, 1925. The same States reported 76 cases for the week ended Aug. 2, 1924."

City reports for week ended August 8, 1925

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1915 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine:									
Portland	73,129	0	2	0	0	0	0	0	2
New Hampshire:									
Concord	22,408	0	1	0	0	0	0	0	0
Vermont:									
Barre	[1] 10,008	0	0	0	0	0	0	0	0
Burlington	23,613	0	0	2	0	0	0	0	0
Massachusetts:									
Boston	770,400	5	33	12	3	1	30	4	8
Fall River	120.912	2	2	3	0	0	4	1	0
Springfield	144,227	0	1	1	0	0	0	0	0
Worcester	191,927	1	2	6	0	0	12	0	1
Rhode Island:									
Pawtucket	68,799	0	1	0	0	0	0	0	0
Providence	242,378	0	5	1	0	1	4	0	1
Connecticut:									
Bridgeport	[1] 143,555	0	4	8	0	0	0	0	0
Hartford	[1] 138,036	0	3	2	0	0	0	1	1
New Haven	172,967	1	2	0	0	0	3	0	2
MIDDLE ATLANTIC									
New York:									
Buffalo	536,718	0	11	3	0	0	10	1	2
New York	5,927,625	0	129	103	7	3	44	8	84
Rochester	317,867	0	4	1	0	0	30	0	2
Syracuse	184,511	2	3	0	0	0	1	0	1
New Jersey:									
Camden	124,157	0	2	3	0	0	2	0	0
Newark	438,699	5	7	11	0	0	16	2	6
Trenton	127,390	0	2	1	0	0	1	0	0
Pennsylvania:									
Philadelphia	1,922,788	5	32	31	0	0	10	4	18
Pittsburgh	613,442	1	14	10	0	0	13	0	15
Reading	110,917	0	2	1	0	0	9	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	406,312	0	6	0	0	1	0	0	3
Cleveland	888,519	26	17	32	4	0	13	3	4
Columbus	261,082	1	2	2	0	1	0	0	2
Toledo	268,338	4	4	2	0	1	3	0	0
Indiana:									
Fort Wayne	93,573	0	2	0	0	0	0	0	0
Indianapolis	342,718	0	5	0	0	0	0	0	3
South Bend	76,709	0	1	7	0	0	0	0	0
Terre Haute	68,939		0						
Illinois:									
Chicago	2,886,121	8	70	47	2	2	25	2	23
Cicero	55,968		1						
Springfield	61,833	1	1	1	0	0	2	0	0
Michigan:									
Detroit	995,668	7	30	24	0	0	7	0	12
Flint	117,968	0	3	3	0	0	0	0	2
Grand Rapids	145,947	0	2	1	0	0	5	0	1

[1] Population Jan. 1, 1920.

City reports for week ended August 8, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Wisconsin:									
Madison	42,519	0	0	4	0	0	8	0	0
Milwaukee	484,595	9	9	8	0	0	3	5	0
Racine	64,393	0	1	3	0	0	0	0	0
Superior	[1] 39,671	0	0	1	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	106,289	1	1	0	0	0	1	0	1
Minneapolis	409,125	21	10	18	0	0	1	0	4
St. Paul	241,891	3	10	8	0	0	0	1	3
Iowa:									
Davenport	61,262	0	0	0	0	----	0	0	----
Des Moines	140,923	0	2	1	0	----	0	0	----
Sioux City	79,662	0	0	1	0	----	0	2	----
Waterloo	39,667	----	1	----	----	----	----	----	----
Missouri:									
Kansas City	351,819	1	6	1	0	0	0	1	8
St. Joseph	78,232	0	1	0	0	0	0	0	1
St. Louis	803,853	1	20	19	0	0	2	0	----
North Dakota:									
Fargo	24,841	----	0	----	----	----	----	----	----
Grand Forks	14,547	0	0	0	0	0	0	0	0
South Dakota:									
Aberdeen	15,829	0	0	0	0	0	1	1	0
Sioux Falls	29,206	1	1	0	0	0	0	0	0
Nebraska:									
Lincoln	58,761	0	0	1	0	0	1	1	1
Omaha	204,382	0	4	1	0	0	1	0	6
Kansas:									
Topeka	52,555	0	0	0	0	0	0	0	0
Wichita	79,261	1	1	3	0	0	0	0	1
SOUTH ATLANTIC									
Delaware:									
Wilmington	117,728	0	1	0	0	0	3	0	1
Maryland:									
Baltimore	773,580	1	9	10	2	1	8	11	
Cumberland	32,361	0	0	1	0	0	0	0	2
Frederick	11,301	0	0	0	0	0	0	0	0
District of Columbia:									
Washington	[1] 437,571	0	4	1	0	0	4	0	11
Virginia:									
Lynchburg	30,277	0	0	0	0	0	1	0	1
Norfolk	159,089	0	0	0	0	0	0	0	2
Richmond	181,044	1	3	10	----	1	0	1	2
Roanoke	55,502	1	1	1	0	0	5	0	0
West Virginia:									
Charleston	45,597	0	0	0	0	0	0	0	0
Huntington	57,918	0	0	0	0	----	0	0	----
Wheeling	[1] 56,208	0	1	2	0	0	0	0	0
North Carolina:									
Raleigh	29,171	0	0	0	0	0	0	0	0
Wilmington	35,719	0	0	0	0	0	1	0	0
Winston-Salem	56,230	0	1	0	0	0	0	0	0
South Carolina:									
Charleston	71,245	0	0	0	0	0	0	0	1
Columbia	39,688	0	0	0	0	----	0	1	----
Greenville	25,789	0	0	0	0	0	0	0	0
Georgia:									
Atlanta	222,963	0	2	1	5	0	0	1	3
Brunswick	15,937	0	0	0	0	0	0	0	0
Savannah	89,448	0	0	1	0	0	0	0	0
Florida:									
St. Petersburg	24,403	0	0	0	0	0	0	0	1
Tampa	56,050	0	0	0	1	1	0	0	3

[1] Population Jan. 1, 1920.

City reports for week ended August 8, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL									
Kentucky:									
Covington	57,877	0	1	1	0	0	0	0	0
Louisville	257,671	0	2	0	0	0	1	0	6
Tennessee:									
Memphis	170,067	0	2	3	0	0	0	0	0
Nashville	121,128	0	1	0	0	0	1	0	2
Alabama:									
Birmingham	195,901	0	2	0	----	1	0	0	3
Mobile	63,858	0	1	1	0	0	0	0	1
Montgomery	45,383	0	1	0	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	30,635	0	1	0	0	----	0	0	----
Little Rock	70,916	----	0	0	0	0	0	----	0
Louisiana:									
New Orleans	404,575	0	5	3	1	1	0	0	6
Shreveport	54,590	0	2	0	0	0	0	0	1
Oklahoma:									
Oklahoma	101,150	0	1	0	0	0	0	0	1
Texas:									
Dallas	177,274	1	3	0	0	0	0	2	3
Galveston	46,877	0	0	1	0	0	0	0	0
Houston	154,970	0	2	0	0	0	0	0	2
San Antonio	184,727	1	0	1	0	0	0	0	2
MOUNTAIN									
Montana:									
Billings	16,927	1	0	0	0	0	1	3	0
Great Falls	27,787	0	1	0	0	0	0	1	0
Helena	[1] 12,037	----	1	----	----	----	----	----	----
Missoula	[1] 12,668	0	0	0	0	0	0	0	0
Idaho:									
Boise	22,806	2	1	0	0	0	0	0	0
Colorado:									
Denver	272,031	1	8	6	0	0	1	3	3
Pueblo	43,519	0	1	0	0	----	0	0	----
New Mexico:									
Albuquerque	16,648	0	0	0	0	0	1	0	0
Arizona:									
Phoenix	33,899	0	0	0	0	0	0	0	0
Utah:									
Salt Lake City	126,241	5	2	1	0	0	0	5	0
Nevada:									
Reno	12,429	0	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	[1] 315,685	4	4	2	0	----	0	8	----
Spokane	104,573	4	2	0	0	----	0	0	----
Tacoma	101,731	2	2	5	0	0	0	0	1
Oregon:									
Portland	273,621	2	4	12	0	0	2	4	3
California:									
Los Angeles	666,853	8	25	16	1	0	6	9	13
Sacramento	69,950	0	2	5	0	0	0	0	1
San Francisco	539,038	13	12	23	2	0	4	2	4

City reports for week ended August 8, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	1	1	0	0	0	1	0	1	0	0	13
New Hampshire:											
Concord	1	0	0	0	0	0	0	0	0	5	4
Vermont:											
Barre	0	0	0	0	0	0	0	0	0	0	2
Burlington	0	0	0	0	0	0	0	0	0	0	5
Massachusetts:											
Boston	11	28	0	0	0	9	4	5	1	58	180
Fall River	1	1	0	0	0	0	1	0	0	2	23
Springfield	2	0	0	0	0	0	1	0	0	2	33
Worcester	1	6	0	0	0	0	1	0	0	3	44
Rhode Island:											
Pawtucket	0	0	0	0	0	2	0	0	0	1	16
Providence	2	4	0	0	0	4	1	3	0	2	38
Connecticut:											
Bridgeport	2	0	0	0	0	1	0	0	0	0	22
Hartford	1	1	0	0	0	2	1	0	0	4	17
New Haven	1	0	0	0	0	0	3	2	0	13	35
MIDDLE ATLANTIC											
New York:											
Buffalo	5	7	0	0	0	0	2	1	0	7	106
New York	30	17	1	0	0	[1]83	34	35	1	76	1,108
Rochester	4	4	0	0	0	3	1	2	0	0	53
Syracuse	3	0	0	0	0	4	0	0	0	15	41
New Jersey:											
Camden	0	0	0	0	0	0	1	0	0	19	22
Newark	4	4	0	0	0	9	2	1	0	42	88
Trenton	0	0	0	0	0	4	1	0	0	2	26
Pennsylvania:											
Philadelphia	15	17	0	0	0	28	12	6	0	85	398
Pittsburgh	6	17	0	0	0	11	4	0	0	9	149
Reading	0	0	0	0	0	0	2	0	0	7	24
Scranton	1		0				0				
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	3	1	1	0	0	13	2	2	0	5	119
Cleveland	6	4	2	0	0	16	4	5	1	59	147
Columbus	1	0	0	1	0	5	2	1	0	8	65
Toledo	5	2	1	0	0	2	2	4	0	19	60
Indiana:											
Fort Wayne	1	0	0	0	0	0	0	5	0	3	25
Indianapolis	3	0	0	5	0	5	3	1	1	46	110
South Bend	1	0	0	0	0	1	0	0	0	0	11
Terre Haute	0		0				0				
Illinois:											
Chicago	26	31	0	0	0	44	5	8	1	84	589
Cicero	0		0				0				
Springfield	1	2	0	0	0	1	1	0	0	1	14
Michigan:											
Detroit	20	24	3	0	0	25	5	5	2	78	218
Flint	2	0	1	1	0	1	1	0	0	10	25
Grand Rapids	2	2	0	0	0	2	1	0	0	5	26
Wisconsin:											
Madison	1	0	0	0	0	0	0	0	0	6	4
Milwaukee	10	1	2	1	0	6	1	1	0	71	79
Racine	1	2	1	0	0	2	0	0	0	3	10
Superior	1	1	1	0	0	1	0	0	0	0	14
WEST NORTH CENTRAL											
Minnesota:											
Duluth	1	3	1	0	0	2	0	2	0	1	18
Minneapolis	6	8	2	0	0	1	2	0	0	5	76
St. Paul	5	8	2	2	0	2	1	7	0	16	

[1] Pulmonary tuberculosis only.

City reports for week ended August 8, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST NORTH CENTRAL—continued											
Iowa:											
Davenport	0	0	1	0			0	0		0	
Des Moines	2	1	0	1			0	0			
Sioux City	0	0	0	0			0	0		0	
Waterloo	0		0				0				
Missouri:											
Kansas City	2	3	1	0	0	7	3	3	0	29	103
St. Joseph	0	0	0	0	0	4	0	0	0	2	37
St. Louis	6	29	1	0	0	9	7	7	0	15	209
North Dakota:											
Fargo	0		0				0				
Grand Forks	0	0	0	0		0	0	0		0	
South Dakota:											
Aberdeen	1	0	0	0			0	0		1	
Sioux Falls	0	2	0	0	0	1	0	0	0	0	6
Nebraska:											
Lincoln	0	0	0	0	0	0	1	0	0	5	10
Omaha	1	2	1	2	0	1	0	1	0	2	51
Kansas:											
Topeka	1	0	0	0	0	1	1	0	0	18	8
Wichita	1	1	0	0	0	1	2	0	1	17	30
SOUTH ATLANTIC											
Delaware:											
Wilmington	0	0	0	0	0	1	1	0	0	0	20
Maryland:											
Baltimore	6	0	1	0	0	14	9	7	1	100	185
Cumberland	0	0	0	0	0	3	0	0	0	1	13
Frederick	0	0	0	0	0	0	0	0	0	0	2
District of Columbia:											
Washington	3	0	0	0	0	12	6	3	1	21	138
Virginia:											
Lynchburg	0	1	0	0	0	0	1	1	1	4	12
Norfolk	0	0	0	0	0	1	3	0	0	6	
Richmond	2	3	0	0	0	5	3	6	1	1	49
Roanoke	1	1	0	0	0	1	2	0	2	0	18
West Virginia:											
Charleston	1	1	1	0	0	0	1	2	0	2	20
Huntington	0	0	0	1			1	5		0	
Wheeling	1	2	0	0	0	3	1	1	0	0	20
North Carolina:											
Raleigh	0	0	0	0	0	3	1	1	0	4	19
Wilmington	0	1	0	0	0	0	0	0	0	0	14
Winston-Salem	1	0	0	0	0	4	2	0	1	0	18
South Carolina:											
Charleston	1	1	0	0	0	1	2	1	0	2	20
Columbia	0	0	0	1			2	0		2	
Greenville	0	0	0	0	0	0	1	0	1	2	1
Georgia:											
Atlanta	2	1	2	0	0	3	4	4	1	0	45
Brunswick	0	0	0	0	0	0	0	2	0	0	3
Savannah	1	0	0	0	0	5	2	1	1	0	34
Florida:											
St. Petersburg	0	0	0	0	0	0	0	0	0	0	9
Tampa	0	0	0	0	0	0	0	0	0	0	21
EAST SOUTH CENTRAL											
Kentucky:											
Covington	0	1	0	0	0	3	1	0	0	0	
Louisville	1	2	0	0	0	5	6	6	1	4	77
Tennessee:											
Memphis	0	1	0	0	0	2	6	16	1	2	42
Nashville	0	0	1	5	0	3	6	16	1	0	33
Alabama:											
Birmingham	2	7	0	4	0	4	6	4	0	2	62
Mobile	1	0	1	0	0	0	1	4	0	0	13
Montgomery	0	0	0	0	0	0	1	2	1	0	

City reports for week ended August 8, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	3	0	0			1	1		1	
Little Rock	0	0	0	0	0	2	2	4	0		
Louisiana:											
New Orleans	1	6	0	1	0	12	5	6	2	15	138
Shreveport	0	0	1	0	0	3	1	4	1	2	25
Oklahoma:											
Oklahoma	0	0	1		0	0	2	10	0	0	20
Texas:											
Dallas	2	3	0	2	0	3	5	7	0	11	38
Galveston	0	0	0	0	0	0	1	0	0	0	7
Houston	1	0	0	0	0	2	1	2	1	0	48
San Antonio	0	0	1	0	0	16	0	4	1	0	55
MOUNTAIN											
Montana:											
Billings	0	0	0	0	0	0	0	0	0	0	2
Great Falls	0	0	1	1	0	0	1	0	0	6	12
Helena	0		0				0				
Missoula	0	0	0	0	0	0	0	1	0	0	7
Idaho:											
Boise	0	0	0	1	0	0	0	0	0	0	1
Colorado:											
Denver	3	2	2	0	0	7	3	5	3	23	76
Pueblo	1	0	0	0	0	0	1	0	0	1	15
New Mexico:											
Albuquerque	0	0	0	0	0	3	0	2	0	0	7
Arizona:											
Phoenix	0	0	0	0	0	10	0	0	0	1	29
Utah:											
Salt Lake City	1	2	1	0	0	1	1	5	1	17	26
Nevada:											
Reno	0	0	0	0	0	0	0	0	0	0	2
PACIFIC											
Washington:											
Seattle	3	0	2	3			1	1		26	
Spokane	2	5	2	0			0	0		4	
Tacoma	1	0	0	2	0	0	0	1	0	4	30
Oregon:											
Portland	3	0	4	0	0	1	0	2	0	2	
California:											
Los Angeles	5	12	1	15	1	10	5	2	2	27	172
Sacramento	1	2	0	0	0	3	2	1	0	0	12
San Francisco	5	3	1	3	0	9	2	1	0	21	113

City reports for week ended August 8, 1925—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)			Typhus fever	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths	Cases	Deaths
NEW ENGLAND											
Massachusetts:											
Boston	0	0	1	0	1	0	1	0	0	0	0
Rhode Island:											
Providence	0	0	0	0	0	0	0	1	0	0	0
MIDDLE ATLANTIC											
New York:											
New York	3	0	5	7	0	0	6	17	5	0	0
New Jersey:											
Camden	0	0	1	1	0	0	0	0	0	0	0
Newark	0	0	1	0	0	0	0	2	0	0	0
Pennsylvania:											
Philadelphia	0	0	0	1	2	1	0	0	0	0	0
Pittsburgh	0	0	0	0	0	0	0	4	0	0	0
EAST NORTH CENTRAL											
Ohio:											
Cleveland	2	0	0	0	0	0	0	2	1	0	0
Indiana:											
Indianapolis	0	1	0	0	0	0	1	0	0	0	0
Illinois:											
Chicago	1	1	0	0	0	0	5	3	0	0	0
Springfield	1	1	0	0	0	0	0	0	0	0	0
WEST NORTH CENTRAL											
Minnesota:											
Duluth	0	0	0	0	0	0	0	1	0	0	0
Minneapolis	1	0	0	0	0	0	1	8	0	0	0
St. Paul	0	0	0	0	0	0	0	1	0	0	0
Iowa:											
Davenport	1	0	0	0	0	0	0	0	0	0	0
Missouri:											
Kansas City	2	1	0	0	0	0	0	4	0	0	0
St. Joseph	0	0	0	0	0	0	0	1	1	0	0
South Dakota:											
Sioux Falls	0	0	0	0	0	0	0	1	0	0	0
Nebraska:											
Omaha	0	0	0	0	0	0	1	3	0	0	0
SOUTH ATLANTIC											
Maryland:											
Baltimore	0	0	0	0	0	0	1	2	0	0	0
District of Columbia:											
Washington	0	0	0	0	0	0	0	1	0	0	0
Virginia:											
Roanoke	0	0	0	0	0	0	0	1	0	0	0
North Carolina:											
Raleigh	0	0	0	0	0	2	0	0	0	0	0
South Carolina:											
Charleston	0	0	0	0	0	1	0	0	0	0	0
Georgia:											
Atlanta	0	0	0	0	1	2	0	0	0	0	0
EAST SOUTH CENTRAL											
Tennessee:											
Memphis	0	0	0	0	0	2	0	0	0	0	0
Alabama:											
Birmingham	0	0			0		1	0	0	0	0

City reports for week ended August 8, 1925—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)			Typhus fever	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths	Cases	Deaths
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	0	0	0	0	0	0	0	0	0	0
Louisiana:											
New Orleans	0	0	0	0	1	2	0	0	0	0	0
Shreveport	0	0	0	1	0	1	0	0	0	0	0
Texas:											
Houston	0	0	0	0	0	0	0	0	0	1	0
San Antonio	0	0	0	0	0	1	0	0	1	0	0
MOUNTAIN											
Colorado:											
Denver	0	0	0	0	0	0	-------	0	1	0	0
Utah:											
Salt Lake City	0	1	0	1	0	0	0	0	0	0	0
PACIFIC											
California:											
Los Angeles	1	0	0	0	0	0	0	17	2	0	0
Sacramento	0	0	1	1	0	0	0	2	0	0	0
San Francisco	0	0	0	0	0	0	1	8	0	0	0

The following table gives the rates per hundred thousand population for 105 cities for the 10-week period ended August 8, 1925. The population figures used in computing the rates were estimated as of July 1, 1923, as this is the latest date for which estimates are available. The 105 cities reporting cases had an estimated aggregate population of nearly 29,000,000 and the 97 cities reporting deaths had more than 28,000,000 population. The number of cities included in each group and the aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, May 31 to August 8, 1925—Annual rates per 100,000 population [1]

DIPHTHERIA CASE RATES

	Week ended—									
	June 6	June 13	June 20	June 27	July 4	July 11	July 18	July 25	Aug. 1	Aug. 8
105 cities	158	120	119	[2] 116	[3] 93	[3] 96	[3] 79	[4] 78	[5] 78	[6] 86
New England	129	94	97	127	117	62	62	62	62	82
Middle Atlantic	244	156	166	163	96	127	97	91	92	83
East North Central	99	95	93	[3] 84	[3] 87	[3] 89	[3] 73	[3] 68	[3] 74	[7] 160
West North Central	189	145	133	114	131	93	85	[8] 107	[8] 100	[9] 109
South Atlantic	91	57	51	73	41	55	26	45	[10] 50	55
East South Central	11	11	6	34	6	23	11	11	11	29
West South Central	42	70	74	46	60	42	28	70	46	23
Mountain	76	181	191	105	181	105	124	115	153	[11] 68
Pacific	145	165	113	107	[12] 145	125	99	104	[12] 75	148

MEASLES CASE RATES

105 cities	619	582	434	[3] 303	[3] 228	[3] 193	[3] 159	[4] 105	[5] 74	[6] 53
New England	872	892	634	407	350	263	261	216	186	132
Middle Atlantic	774	727	544	382	258	249	199	128	77	69
East North Central	893	844	592	[3] 404	[3] 321	[3] 225	[3] 191	[3] 119	[3] 72	[7] 48
West North Central	114	135	87	60	31	35	29	[8] 19	[8] 29	[9] 11
South Atlantic	410	297	349	278	262	211	148	95	[10] 71	45
East South Central	132	212	114	132	97	120	80	63	29	11
West South Central	28	14	19	5	5	0	0	5	0	0
Mountain	38	95	76	95	38	57	29	38	105	[11] 20
Pacific	165	87	84	52	[12] 37	41	64	20	[12] 37	29

SCARLET FEVER CASE RATES

105 cities	267	174	165	[3] 117	[3] 96	[3] 90	[3] 61	[4] 57	[5] 57	[6] 53
New England	266	179	142	107	112	147	80	72	75	102
Middle Atlantic	263	156	145	100	79	81	45	43	37	33
East North Central	317	204	217	[3] 157	[3] 122	[3] 97	[3] 67	[3] 67	[3] 64	[7] 51
West North Central	481	325	328	184	168	143	108	[8] 124	[8] 126	[9] 119
South Atlantic	130	61	61	45	59	45	47	16	[10] 35	22
East South Central	126	160	160	91	74	126	80	29	63	63
West South Central	88	46	37	56	46	9	23	32	31	56
Mountain	334	277	143	210	105	153	86	162	86	[11] 39
Pacific	151	162	116	107	[12] 71	52	61	46	[12] 66	64

SMALLPOX CASE RATES

105 cities	46	37	36	[3] 25	[3] 14	[3] 16	[3] 15	[4] 10	[5] 10	[6] 9
New England	0	0	0	0	0	2	2	5	0	0
Middle Atlantic	4	2	1	0	1	0	1	0	0	0
East North Central	65	42	45	[3] 20	[3] 14	[3] 12	[3] 10	[3] 8	[3] 4	[7] 6
West North Central	95	52	60	37	17	21	17	[8] 13	[8] 15	[9] 9
South Atlantic	39	22	30	18	10	24	8	16	[10] 2	2
East South Central	114	297	200	132	63	80	46	40	23	51
West South Central	32	5	19	0	5	5	14	5	5	14
Mountain	38	29	19	29	29	19	19	0	57	[11] 20
Pacific	191	148	154	171	[12] 89	102	119	67	[12] 120	67

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1923.
[2] Cicero, Ill., not included. Report not received at time of going to press.
[3] Cicero, Ill., and Spokane, Wash., not included.
[4] Cicero, Ill., and Fargo, N. Dak., not included.
[5] Cicero, Ill., Fargo, N. Dak., Tampa, Fla., and San Francisco, Calif., not included.
[6] Terre Haute, Ind., Cicero, Ill., Waterloo, Iowa, Fargo, N. Dak., and Helena, Mont., not included.
[7] Terre Haute, Ind., and Cicero, Ill., not included.
[8] Fargo, N. Dak., not included.
[9] Fargo, N. Dak., and Waterloo, Iowa, not included.
[10] Tampa, Fla., not included.
[11] Helena, Mont., not included.
[12] Spokane, Wash., not included.
[13] San Francisco, Calif., not included.

Summary of weekly reports from cities, May 31 to August 8, 1925—Annual rates per 100,000 population—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	June 6	June 13	June 20	June 27	July 4	July 11	July 18	July 25	Aug. 1	Aug. 8
105 cities	25	28	22	[2] 27	[2] 35	[2] 35	[2] 38	[4] 35	[5] 40	[6] 41
New England	30	25	20	17	22	25	32	22	22	27
Middle Atlantic	26	17	14	18	15	17	25	21	30	23
East North Central	10	10	4	[2] 9	[2] 10	[2] 14	[2] 12	[2] 8	[2] 10	[7] 21
West North Central	8	25	12	10	21	44	44	[8] 49	[8] 48	[9] 43
South Atlantic	41	65	49	71	69	59	55	53	[10] 66	59
East South Central	40	120	80	91	200	177	223	177	183	274
West South Central	88	116	130	148	246	185	134	172	178	130
Mountain	76	48	38	0	10	29	19	48	57	[11] 107
Pacific	9	15	6	20	[12] 22	17	32	29	[13] 25	17

INFLUENZA DEATH RATES

105 cities	11	7	6	[2] 6	[2] 4	[2] 2	[2] 2	[4] 2	[5] 1	[14] 3
New England	2	5	2	7	2	0	0	0	0	5
Middle Atlantic	11	6	4	6	2	2	2	3	1	2
East North Central	10	7	7	[2] 6	[2] 5	[2] 2	[2] 3	[2] 1	[2] 0	[7] 3
West North Central	4	9	7	4	0	0	0	[8] 4	[8] 0	[8] 0
South Atlantic	6	4	6	2	6	0	4	4	[10] 2	6
East South Central	54	17	34	17	11	17	0	6	0	6
West South Central	5	20	10	10	10	10	10	0	0	5
Mountain	29	10	0	10	0	0	0	10	0	[11] 0
Pacific	12	4	4	4	4	0	4	0	[13] 0	0

PNEUMONIA DEATH RATES

105 cities	128	104	81	66	[2] 58	[2] 61	[2] 57	[4] 50	[5] 62	[14] 56
New England	72	117	62	60	45	45	50	52	55	37
Middle Atlantic	168	130	93	75	62	64	63	52	65	65
East North Central	114	89	81	[2] 42	[2] 45	[2] 59	[2] 47	[2] 40	[2] 52	[7] 38
West North Central	57	59	33	50	42	39	55	[8] 40	[8] 42	[8] 53
South Atlantic	146	122	77	96	75	67	51	55	[10] 63	73
East South Central	126	63	103	120	97	91	74	63	74	69
West South Central	66	87	92	76	61	61	76	66	111	71
Mountain	95	105	143	57	67	76	86	57	76	[11] 29
Pacific	131	49	65	53	82	74	45	65	[13] 85	78

[2] Cicero, Ill., not included. Report not received at time of going to press.
[3] Cicero, Ill., and Spokane, Wash., not included.
[4] Cicero, Ill., and Fargo, N. Dak., not included.
[5] Cicero, Ill., Fargo, N. Dak., Tampa, Fla., and San Francisco, Calif., not included.
[6] Terre Haute, Ind., Cicero, Ill., Waterloo, Iowa, Fargo, N. Dak., and Helena, Mont., not included.
[7] Terre Haute, Ind., and Cicero, Ill., not included.
[8] Fargo, N. Dak., not included.
[9] Fargo, N. Dak., and Waterloo, Iowa, not included.
[10] Tampa, Fla., not included.
[11] Helena, Mont., not included.
[12] Spokane, Wash., not included.
[13] San Francisco, Calif., not included.
[14] Terre Haute, Ind., Cicero, Ill., Fargo, N. Dak., and Helena, Mont., not included.

Number of cities included in summary of weekly reports and aggregate population of cities in each group, estimated as of July 1, 1923

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases	Aggregate population of cities reporting deaths
Total	105	97	28,898,350	28,140,934
New England	12	12	2,098,746	2,098,746
Middle Atlantic	10	10	10,304,114	10,304,114
East North Central	17	17	7,032,535	7,032,535
West North Central	14	11	2,515,330	2,381,454
South Atlantic	22	22	2,566,901	2,566,901
East South Central	7	7	911,885	911,885
West South Central	8	6	1,124,564	1,023,013
Mountain	9	9	546,445	546,445
Pacific	6	3	1,797,830	1,275,841

FOREIGN AND INSULAR

THE FAR EAST

Report for the week ended August 1, 1925.—The following report for the week ended August 1, 1925, was transmitted by the Far Eastern Bureau of the health section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Port	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Calcutta	----------	0	----------	11	5	5
Bombay	----------	3	----------	1	2	2
Madras	----------	0	----------	0	28	8
Rangoon	----------	25	----------	1	1	0
Karachi	----------	0	0	0	0	0
Negapatam	----------	0	0	0	0	0
Singapore[1]	1	1	0	0	0	0
Port Swettenham	0	0	0	0	0	0
Penang	0	0	0	0	0	0
Batavia	0	0	0	0	0	0
Soerabaya	1	1	0	0	0	0
Samarang	0	0	0	0	0	0
Belawan Deli	0	0	0	0	0	0
Macassar	0	0	0	0	0	0
Sandakan (North Borneo)	0	0	0	0	0	0
Kuching (Sarawak)	0	0	0	0	4	1
Bangkok[2]	1	1	0	0	0	0
Saigon and Cholon	0	0	0	0	0	0
Hongkong	0	0	0	0	0	0
Shanghai	0	0	18	7	0	0
Manila	0	0	3	2	0	0
Colombo	0	0	0	0	0	0
Nagasaki	0	0	0	0	0	0
Yokohama	0	0	0	0	0	0
Simonoseki	0	0	0	0	0	0
Kobe	0	0	0	0	0	0
Keelung (Formosa)	0	0	0	0	0	0
Fou-San-Po (Korea)	0	0	0	0	0	0
Adelaide	0	0	0	0	0	0
Brisbane	0	0	0	0	0	0
Fremantle	0	0	0	0	0	0
Melbourne	0	0	0	0	0	0
Sydney	0	0	0	0	0	0
Suez	0	0	0	0	0	0
Port Said	0	0	0	0	0	0
Mombasa (Kenya)	0	0	0	0	0	0
Massaua (Eritrea)	0	0	0	0	0	0
Durban (Natal)	0	0	0	0	0	0
Cape of Good Hope	0	0	0	0	0	0

[1] No infection found among rats examined. [2] Plague-infected rats taken.

PLAGUE ON VESSEL

Steamship "Efstratios Cavoundis"—At Alexandria, Egypt, via ports in Greece and Syria—July 7–11, 1925.—Four cases of plague with one death were reported on the steamship *Efstratios Cavoundis*, at Alexandria, Egypt, during the period July 7 to 11, 1925. The finding of dead rats on board in transit was reported. The vessel

was stated to have touched at ports in Greece, including the islands of Cyprus and Rhodes, at ports in Syria, and at Port Said.

AUSTRIA

Varicella made notifiable.—Information received under date of May 13, 1925, shows that by ordinance dated April 29, 1925, of the Federal Ministry for Social Welfare in Austria, varicella (chicken pox) was declared notifiable.

CHINA

Plague—North Manchuria—On Chinese Eastern Railway—May 27, 1925.—Information dated July 20, 1925, shows the occurrence on May 27, 1925, of two cases of plague, of which one, with fatal termination, was pneumonic in type, at the village of Hohonteh, on the Eastern Chinese Railway, halfway between Hailar and Manchouli. Both cases were in tarabagan hunters lately returned from a hunting trip.

CUBA

Malaria—Santiago de Cuba—July 19–August 11, 1925.—Malaria has been reported at Santiago de Cuba as follows: July 19 to August 1, 1925—cases, 118; deaths, 3; on August 11, 1925, 510 cases reported present with 57 cases and 4 deaths notified for the week ended August 8, 1925.

ESTHONIA

Communicable diseases—May, 1925.—During the month of May, 1925, communicable diseases were reported in Esthonia as follows: Diphtheria, 40 cases; measles, 30; paratyphoid fever, 3; scarlet fever, 21; tuberculosis, 170; typhoid fever, 50; typhus fever, 2.

Leprosy.—During the same period, three cases of leprosy were reported in Esthonia.

ITALY

Malta fever—Province of Syracuse—July 6–26, 1925.—Two cases of Malta (Mediterranean) fever have been reported in the Province of Syracuse, island of Sicily, Italy, occurring, respectively, during the weeks ended July 12 and 26, 1925.

LATVIA

Communicable diseases—May, 1925.—During the month of May, 1925, communicable diseases were reported in the Republic of Latvia as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	12	Scarlet fever	201
Diphtheria	48	Smallpox	3
Dysentery	10	Typhoid fever	55
Malaria	1	Typhus fever	5
Measles	743	Whooping cough	137
Mumps [1]	53		

Population: 2,000,000 (estimated). [1] Epidemic.

Leprosy.—During the same period a case of leprosy was reported in the Republic of Latvia.

MALTA

Communicable diseases—July 1–15, 1925.—During the period July 1 to 15, 1925, communicable diseases were reported in the island of Malta as follows

Disease	Cases	Disease	Cases
Broncho-pneumonia	2	Scarlet fever	1
Chicken pox	12	Smallpox	2
Diphtheria	1	Tuberculosis	15
Malta (undulant) fever	48	Typhoid fever	11
Measles	10		

Population (civil) 223,088.

PHILIPPINE ISLANDS

Examination of rats—June, 1925.—During the month of June, 1925, 4,392 rats were taken and examined in the city of Manila, Philippine Islands. No plague-infected rat was found.

SIBERIA

Plague—Transbaikalia—May, 1925.—Information received under date of July 20, 1925, shows the occurrence on May 19, 1925, of a death from bubonic plague at the village of Nadoarovsk, near Sharasun station, on the Chita Railway. The locality was stated to be well within the plague endemic area of Transbaikalia and in vicinity of Manchouli. Later reports indicated the tarabagan as the source of the infection.

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

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended August 28, 1925 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon				May 3–30, 1925: Cases, 21; deaths, 15.
India:				
Bombay	June 28–July 4	2	2	
Madras	July 12–18	1	1	
Siam:				
Bangkok	June 21–27	1	1	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

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

Reports Received During Week Ended August 28, 1925—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
British East Africa:				
Uganda—				
Entebbe	May 7-June 4	78	73	
Ceylon:				
Colombo	June 21-27	1		
Do	July 5-11	1		
China:				
North Manchuria	May 27	2	1	
Egypt				July 9-15, 1925: Cases, 7; Total, Jan. 1-July 15, 1925—Cases, 88 corresponding period, 1924—Cases, 328.
India				June 21-27, 1925: Cases, 212; deaths, 162.
Bombay	June 14-20	3	3	
Do	June 28-July 4	5	4	
Madras Presidency	June 6-27	10	8	
Indo-China:				
Saigon	June 15-21	1	1	Including 10 square kilometers surrounding country.
Java:				
Batavia	June 13-19	7	6	
Cheribon	May 17-23		12	Out of date.
Pekalongan	do		1	Do.
Nigeria	March-April	18	14	
Siam:				
Bangkok	June 14-20	2	2	
Siberia:				
Transbaikalia	May 19	1	1	At locality on Chita Railway.
Straits Settlements:				
Singapore	June 28-July 4	1	1	
Union of South Africa:				
Orange Free State—				
Boshof District	June 28-July 4	1	1	Native.
On vessel:				
Steamship Efstratios Cavoundis.	July 7-11	4	1	At Alexandria, Egypt. Vessel arrived July 7, 1925. Regular route, ports in Greece, Syria, and Port Said. Dead rats reported found on board.

SMALLPOX

Brazil:				
Pernambuco	June 7-27	5	3	
Rio de Janeiro	June 28-July 18	18	10	
British East Africa:				
Kenya—				
Mombasa	May 24-June 20	6	4	
Tanganyika Territory	May 10-23	60	18	
British South Africa:				
Southern Rhodesia	June 25-July 1	1		
China:				
Hongkong	June 7-13	1		
Manchuria—				
Dairen	June 8-28	8	1	
Do	June 29-July 5	1	1	
Nanking	June 28-July 11			Present.
Shanghai	July 6-11	1		
Swatow	July 5-11			Stated to be endemic.
Chosen:				
Seoul	June 1-30	1		
France				May 1-31, 1925: Cases, 18.
Germany:				
Baden (State)	July 12-25	2	1	
Great Britain:				
England and Wales	July 19-Aug. 1	110		
Newcastle-on-Tyne	July 26-Aug. 1	1		
Greece				May 1-31, 1925: Cases, 2.
Hungary:				
Budapest	July 5-18	13		
India				June 21-27, 1925: Cases, 2,746 deaths, 605.
Bombay	June 14-20	13	12	
Do	June 28-July 4	6	3	
Karachi	June 21-27	1		
Do	June 28-July 4	1	1	
Madras	June 28- July 4	16	7	
Do	July 12-18	28	6	

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

Reports Received During Week Ended August 28, 1925—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Irak	May 3–30	20	3	
Italy				Apr. 19–May 30, 1925: Cases, 28.
Japan:				
Taiwan				July 1–10, 1925: Cases, 1.
Tokyo	June 14–20	1		
Yokohama	June 6–12	2		
Java:				
Soerabaya	May 28–June 20	73	17	
Latvia				May, 1925: Cases, 3.
Lithuania	February–April	5		
Malta				July 1–15, 1925: Cases, 2.
Mexico:				
Guadalajara	Aug. 4–10		2	
Nigeria	March–April	956	112	
Poland				Apr. 26–May 9, 1925: Cases, 4.
Portugal:				
Lisbon	July 19–Aug. 1	21		
Oporto	July 19–25	4		
Rumania				January–February, 1925: Cases, 20.
Russia	December, 1924	1,000		Later than previously published reports.
Do	January–February	1,444		Do.
Do	March	1,013		
Siam:				
Bangkok	June 14–27	3	2	
Spain:				
Malaga	July 26–Aug. 1		5	
Switzerland:				
Lucerne	June 14–20	4		
Tripoli				Mar. 4–Apr. 15, 1925: Cases, 6.
Tunis:				
Tunis	July 22–Aug. 4	4	3	
Uruguay				February–March, 1925: Cases, 4.

TYPHUS FEVER

Egypt:				
Alexandria	July 9–15	1		
Esthonia				May 1–31, 1925: Cases, 2.
Greece				Do.
Patras	June 28–July 4		2	
Latvia				May, 1925: Cases, 5.
Lithuania				March–April, 1925: Cases, 118; deaths, 5.
Mexico:				
Mexico City	July 12–25	19		Including municipalities in Federal district.
Morocco	January–April	337		Later than previously published reports.
Do	May 1–31	25		
Palestine				June 14–29, 1925: Cases, 4. Occurring in four localities.
Poland				Apr. 26–May 9, 1925: Cases, 297; deaths, 27.
Rumania				January–February, 1925: Cases, 606; deaths, 54.
Constantza	June 21–30	1		December, 1924: Cases, 5,062.
Russia				January–February, 1925: Cases, 11,086. Later than previously published reports.
Do				March, 1925: Cases, 7,250.
Tunis:				
Tunis	July 22–28	2	1	
Union of South Africa:				
Cape Province	June 21–July 4			Outbreaks.
Natal	do			Do.
Durban	do	4		
Orange Free State	June 21–27			Do.

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

Reports Received from June 27 to August 21, 1925 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	May 11–20	1		
Ceylon				Jan. 25–May 2, 1925: Cases, 57; deaths, 43.
Colombo	May 10–16	2	2	
India				Apr. 26–June 20, 1925: Cases, 34,322; deaths, 20,999.
Bombay	May 10–June 27	2	1	
Calcutta	May 3–9	58	49	
Do	May 17–23	79	61	
Do	June 14–20	12	11	
Madras Presidency	June 6–20	4	1	
Do	July 5–11	1	1	
Rangoon	May 3–June 6	22	15	Feb. 8–14, 1925: Cases, 2: deaths, 2. Received out of date.
Do	June 14–27	12	8	
Do	June 28–July 4		1	
Indo-China:				
Saigon	May 4–June 7	4	3	
Philippine Islands:				
Albay—				
Tabaco	June 14–29	1	1	
Bulacan	do	1	1	
Camarines Sur	July 3–9	1		
Lagonoy	June 6–12	2	1	
Manila	June 15–28	3		
Do	June 29–July 12	6	1	June 1–Aug. 8, 1925: Cases, 17.
Mountain Province	June 23–29	1	1	
Siam:				
Bangkok	Apr. 29–June 6	8	3	
Turkey:				
Constantinople	May 16–22	1		

PLAGUE

Brazil:				
Bahia	May 3–June 13	5	4	
British East Africa:				
Uganda	Feb. 1–28	28	28	
Ceylon:				
Colombo	May 10–June 30	10	10	
Do	June 28–July 4	4	3	
China:				
Foochow	May 24–31			Reported present in epidemic form.
Ecuador:				
Guayaquil	June 1–15	1	1	May 16–June 30, 1925: Rats examined, 30,347; found infected, 95. July 1–15, 1925: Rats taken, 9,926; rats found infected, 16.
Egypt				June 1–July 8, 1925: Cases, 81. Corresponding period 1924—cases, 323.
City—				
Alexandria	June 17–24	2	2	Bubonic.
Port Said	June 17–July 8	6	3	
Suez	June 14–27	3	2	
Province—				
Assiout	June 5	1	1	
Beni-Souef	June 10–16	8	4	
Charkieh	June 6–8	1	1	
Kena	June 17	1	1	
Minia	June 6–17	3	2	
Gold Coast	Mar.–Apr.	3	3	
Hawaii:				
Honokaa				June 28, 1925: Plage-infected rat trapped at Honokaa Plantation.
India				Apr. 26–June 20, 1925: Cases, 23,667; deaths, 19,793.
Bombay	Apr. 26–June 27	62	56	
Calcutta	May 30–June 6	1	1	
Karachi	May 18–June 6	4	3	
Madras	May 10–June 30	5	3	
Rangoon	May 3–June 27	113	95	Feb. 8–14, 1925: Cases, 13: deaths, 13. (Received out of date.)
Do	June 28–July 4	20	18	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

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

Reports Received from June 27 to August 21, 1925—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Indo-China:				
Cochin-China—				
Saigon	Apr. 20–May 31	2	2	Including 100 square kilometers of surrounding country.
Iraq:				
Bagdad	May 24–June 6	9		
Java:				
Batavia	May 6–June 12	25	25	
Cheribon	Apr. 2–May 30		56	
Pasoeroean Residency	Mar. 7–May 25			Epidemic in several localities.
Pekalongan	Apr. 9–May 16		60	
Do	May 24–30		17	
Soerabaya	May 7–27	3	3	
Soerakarta Residency	May 28			Epidemic at Kalidgambe.
Tegal	Apr. 2–16		36	
Do	May 24–30		8	
Madagascar:				
Province—				
Itasy	Apr. 1–15	1	1	
Tananarive	Apr. 1–June 15	216	185	
Town—				
Tamatave (port)	Apr. 1–15	2		
Tananarive Town	Apr. 16–May 31	5	5	
Mauritius				April, 1925: One case.
Nigeria	December, 1924	17	13	
Do	January, 1925	10	6	
Russia:				
Kalmyk District	May 19–31	10	8	
North Caucasus	June 6–7	2	2	
Urts	May 25–June 3	2	2	In laboratory worker and contact. Locality, Province of Bukeevsk.
Siam:				
Bangkok	Apr. 26–June 13	11	9	
Straits Settlements:				
Singapore	May 3–30	9	9	
Turkey:				
Constantinople	May 25–31	1		
Union of South Africa:				
Kimberley	June 14–20	1	1	In a Malay camp.

SMALLPOX

Algeria:				
Algiers	May 1–June 30	43	2	
Brazil:				
Bahia	June 28–July 4	2		
Pernambuco	Apr. 26–May 30	40	21	
Porto Alegre	June 14–20		1	
Rio de Janeiro	May 9–June 27	5	1	
British East Africa:				
Kenya—				
Mombasa	Apr. 19–May 23	21	9	
Nairobi	May 3–9	3	2	
Tanganyika Territory	Apr. 5–May 9	22	6	
Uganda	Feb. 1–28	2		
British South Africa:				
Northern Rhodesia	Apr. 28–May 4	3		
Southern Rhodesia	June 11–17	1		European
Canada:				
British Columbia—				
Vancouver	June 1–28	7		
Do	July 6–Aug. 1	8		
New Brunswick—				
Restigouche County	June 1–30	1		
Ontario				May 31–July 25, 1925: Cases, 20; deaths, 1. Corresponding period, 1924: Cases, 24.
Galt	June 14–20	2		
Kingston	do	1		
Quebec—				
Quebec	July 26–Aug. 1	2	2	
Saskatchewan—				
Regina	May 24–30	3		

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

Reports Received from June 27 to August 21, 1925—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China:				
Amoy	May 17–June 30		7	
Antung	May 11–July 5	8		
Canton	May 10–June 13			Present.
Chungking	May 3–30			Widespread.
Foochow	May 9–June 20			Present.
Hongkong	Apr. 19–June 6	14	12	
Manchuria—				
Dairen	Apr. 13–June 7	107	16	
Harbin	May 13–June 2	2		
Nanking	May 9–June 27			Do.
Shanghai	May 3–June 6	5	2	
Swatow	May 17–July 4			Stated to be endemic.
Tientsin	May 9–June 6	3		
Chosen:				
Seoul	May 1–31	1		
Egypt:				
Alexandria	May 21–27	1	1	
Cairo	Mar. 19–May 13	5		
France				February–April, 1925: Cases, 59.
Paris	May 21–31	1		
Germany:				
Stuttgart	July 5–11	3	1	
Gold Coast				January–April, 1925: Cases, 367, deaths, 29.
Great Britain:				
England and Wales				May 24–June 27, 1925: Cases, 441.
Birmingham	June 7–13	1		June 28–July 4, 1925: Cases, 243.
Cardiff	June 14–20	1		
Newcastle-on-Tyne	May 31–June 27	4		
Do	June 28–July 18	7		
Greece				January–April, 1925: Cases, 44;
Athens	May 1–31		2	deaths, 8.
Do	June 24–30	27	3	
India				Apr. 26–June 20, 1925: Cases, 33,911; deaths, 8,482.
Bombay	Apr. 26–June 27	143	103	
Calcutta	May 3–9	109	100	
Do	May 17–23	75	61	
Do	May 31–June 20	88	81	
Karachi	May 18–June 13	5	1	
Madras	May 18–June 27	152	66	
Do	July 5–10	24	12	
Rangoon	May 3–June 27	207	99	
Do	June 28–July 4	2	1	
Indo-China:				
Cochin-China—				
Saigon	Apr. 20–May 21	13	9	Including 100 square kilometers of surrounding country.
Irak				Jan. 11–May 2, 1925: Cases, 116;
Bagdad	Apr. 26–May 2	3		deaths, 43.
Italy	Dec. 28–Apr. 18	44		
Jamaica				Apr. 26–June 27, 1925: Cases, 110 (reported as alastrim).
Kingston	Apr. 26–June 27	19		Reported as alastrim.
Japan:				
Kobe	May 24–June 27	2		
Nagasaki	May 15–21	2		
Do	July 6–12	1		
Yokohama	May 25–31	1		
Java:				
Batavia	May 2–June 26	2		
Brebes	Apr. 22–28	1		
Cheribon	Apr. 16–22		1	
Pekalongan	Apr. 2–8	1		
Rembang Residency	Apr. 23			Epidemic at Kawedanan.
Soerabaya	Apr. 16–May 27	201	20	
South Bantam	Apr. 16–22	1		
Tegal	Mar. 29–May 2	2	1	
Malta	June 1–50	9		

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

Reports Received from June 27 to August 21, 1925—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Mexico:				
Durango	do		11	
Do	July 1–31		13	
Guadalajara	June 2–29		10	
Do	June 30–Aug. 3		11	
Mexico City	May 24–June 27	12		Including municipalities in Federal district.
Do	July 5–11	3		
Tampico	June 1–10		1	
Do	July 1–31	4	2	
Morocco:				
Tangier	May 17–June 5			Present among natives.
Nigeria				December, 1924; Cases, 40; deaths, 16.
Do				January–February, 1925: Cases, 421; deaths, 11.
Persia:				
Teheran	Mar. 21–Apr. 21		11	
Poland				Mar. 1–Apr. 4, 1925: Cases, 19.
Portugal:				
Lisbon	Apr. 26–June 27	36	6	
Do	June 28–July 18	13	7	
Oporto	June 14–20	1		
Russia				December, 1924: Cases, 880. January–February, 1925: Cases, 1,355.
Siam:				
Bangkok	Apr. 26–June 13	24	17	
Spain:				
Malaga	May 24–June 20		15	
Do	July 5–25		8	
Valencia	May 31–June 27	3	1	
Straits Settlements:				
Singapore	May 17–23	1		
Switzerland:				
Berne	June 7–13	1		
Syria:				
Beirut	Apr. 21–30	1		
Tripoli				Jan. 3–Mar. 4, 1925: Cases, 8.
Tunis:				
Tunis	May 6–June 30		46	
Do	July 1–21		17	
Turkey:				
Constantinople	May 16–22	2		
Union South Africa:				
Cape Province	May 24–30			Outbreaks.
Port Elizabeth	Apr. 18–25	8	1	
Transvaal	May 3–June 6			Do.
Uruguay				December, 1924: Cases, 8.

TYPHUS FEVER

Algeria:				
Algiers	May 11–20	6	2	In vicinity, 12 cases. Isolated.
Bulgaria				November-December, 1924: 1 case. January-March, 1925: Cases, 36; deaths, 2.
Sofia	May 28–June 3	2		
Chile:				
Valparaiso	May 10–July 18		9	
China:				
Manchuria—				
Harbin	May 19–June 2	2		
Czechoslovakia				April, 1925; 1 case.
Egypt:				
Alexandria	May 7–June 3	3	1	
Cairo	Mar. 26–May 13	6	4	
Port Said	May 14–20	1	1	
Esthonia				Apr. 1–30, 1925: Cases, 4.
Greece				January–April, 1925: Cases, 52; deaths, 6.
Athens	May 1–31		2	
Kalamata	Apr. 1–30		2	
Latvia				April, 1925: Cases, 12.
Libau	July 14–20	1		

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

Reports Received from June 27 to August 21, 1925—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Mexico:				
Mexico City	May 24–June 6	24		Including municipalities in Federal district.
Do	June 28–July 11	15		Do.
San Luis Potosi	June 26–July 4		1	
Morocco				January–April, 1925: Cases, 290.
Palestine:				
Jaffa District	June 2–8	2		
Maijdal	May 26–June 8	3		
Ramleh	May 19–25	1		
Safad	June 9–15	1		
Peru:				
Arequipa	Apr. 1–30		2	
Poland				Mar. 1–Apr. 11, 1925: Cases, 1,195; deaths, 74.
Portugal:				
Oporto	May 31–June 6	1		
Do	July 5–11	1		
Rumania:				
Constanta	May 1–31	1		
Russia				December, 1924: Cases, 4,227; January–February, 1925: Cases, 9,721.
Spain:				
Valencia	June 7–13		1	
Tunis:				
Tunis	May 21–June 17	16	8	
Do	July 8–21	7	3	
Turkey:				
Constantinople	May 11–31	7	2	
Union of South Africa:				
Cape Province	Apr. 19–June 13	39	5	
Natal	May 3–31	14		
Durban	Feb. 1–May 9	14		
Orange Free State	Feb. 1–June 13	26	4	
Transvaal	do	11	2	
Yugoslavia:				
Zagreb	May 8–21	7	1	

YELLOW FEVER

Gold Coast	Apr. 1–30	1		
Ivory Coast:				
Lahou	June 1–10	1	1	
Nigeria:				
Ibadan	Apr. 24–30	1		
Lagos	Apr. 29–May 5	4	1	

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