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A REPORT OF THE DEPARTMENTAL COMMITTEE ON MORPHINE AND HEROIN ADDICTION TO THE BRITISH MINISTRY OF HEALTH[1]

A Review, by WALTER L. TREADWAY, *Surgeon, United States Public Health Service*

A committee, headed by Sir Humphry D. Rolleston and composed of eight other prominent British physicians, was appointed by the British Ministry of Health on September 30, 1924, for the purpose of considering when it is medically advisable to supply morphine and heroin to persons addicted thereto, what precautions are to be observed by medical practitioners for avoiding abuses of these drugs, and what measures are expedient for securing observance of such precautions. At a subsequent date the committee was also requested to consider the advisability of bringing within the scope of the "dangerous drugs acts and regulations" any or all preparations containing morphine or heroin.

PREVALENCE, CAUSE, AND TREATMENT

After reviewing all of the evidence submitted, the committee concluded that addiction to morphine and heroin is rare in England and has diminished in recent years. The decrease is attributed largely to the restrictions imposed by the dangerous drugs acts. Drug addiction is proportionately more common in great urban centers, among those who handle narcotic drugs for professional or business reasons, and among those especially liable to nervous and mental strain.

Ease of access was considered an important factor in the production of addiction. The immediate or precipitating causes of addiction were related to the previous use of drugs in medical treatment; to self-treatment for the relief of pain; to recourse to drugs in emotional distress; to the influence of other addicts; and to indulgence for the sake of curiosity or experience. The report points out that addiction is more readily induced in some persons than in others, the most important predisposing cause being an inherent mental or nervous instability. Evidence was submitted, however, to show that addiction may be induced by the injudicious use of the drug in persons apparently free from any nervous or mental instability, and, conversely, that due care in administration may avert this result even in the unstable.

[1] Published by His Majesty's Stationery Office, London, Jan. 21, 1926.

The committee found that the proportion of complete cures of drug addiction varied from 15 or 20 per cent to 60 or 70 per cent, the highest percentages being claimed by practitioners adopting the abrupt method of withdrawal, and who had carried out the treatment in institutions. Institutional treatment afforded the best hope of cure; and addicts should always, if possible, be induced to undergo treatment in an institution. The ability of an individual to become independent of the drug is regarded as the completion of the first stage of treatment only. The permanent cure requires a long period of aftercare in order to educate the patient's will power and to change his mental outlook. Attention is also invited to the necessity for improving the individual's social conditions and environment.

QUESTION OF LEGITIMATE MEDICAL TREATMENT

The committee's inquiries showed that some medical practitioners were ordering or supplying dangerous drugs to individuals simply to enable those addicted thereto to satisfy their craving, or the circumstances of supply were such as to cast doubt on the method and intent as being bona fide medical treatment. For example, large quantities of drugs were prescribed over long periods of time for persons seen at long intervals or not seen at all. In some instances drugs were sent by post for some alleged urgent need; in others, drugs were obtained concurrently from two or more practitioners; and in still other instances large quantities of drugs were purchased or supplied practitioners and used for administration to themselves. It is evident that drugs were being supplied and used without the necessity for medical treatment and in contravention of the intent of Parliament.

In some cases, however, the question of violation of law hinged upon whether the drugs had been supplied for purposes of medical treatment only. Since in many instances the so-called abrupt withdrawal treatment for drug addiction was impracticable, outside an institution, the question arose whether this would justify the administration of morphine or heroin over very long periods in nondiminishing doses. The Home Office assumed that the object of treatment in cases of addiction must be cure, if possible, by steady diminution of dose and possibly ultimate complete discontinuance.

Other problems arose respecting the question of bona fide medical treatment. In some instances practitioners had more or less questionable opportunities for observation of individual cases that were sufficient to justify the administration of narcotic drugs for purposes of legitimate treatment. These violations were handled in one of three different ways: First, by communication or direct interview with the doctor, pointing out the requirements of the dangerous drugs acts and regulations and seeking his cooperation; second, by prosecution for violations of law; and, third, by bringing the matter before the

General Medical Council with the possibility that the physician's conduct would be regarded as "infamous in a professional respect."

Exceptional difficulties presented themselves respecting doctors who were addicted to narcotic drugs. They can not be deprived of their authority to possess the drugs except after conviction for an offense under the dangerous drugs acts, and the medical profession objected to a regulation providing that doctors might not prescribe for themselves. Furthermore, it was not believed desirable to supply a list of such doctors to wholesale chemists with a request that they would inform the Home Office of purchases made by doctors on the list.

WHEN ADVISABLE TO SUPPLY ADDICTS

In considering when it is medically advisable to supply morphine and heroin to persons addicted thereto the committee outlines certain precautions to be observed in the administration of these drugs. First, it is pointed out that suitable institutional treatment is more desirable; but if this is not feasible, the dose must be steadily reduced with a view to ultimate complete withdrawal. Patients should be kept under close observation, should be in the care of a capable and efficient nurse, and under sufficient control to preclude any possibility of obtaining supplies of the drug. Such a plan for ambulatory treatment, while theoretically possible, is, from all practicable purposes, contrary to the majority medical opinion in America. The report recognizes some of these difficulties; for it is recommended that, in case a complete cure can not be effected by the ambulatory method, a second medical opinion should be obtained before the medical practitioner assumes further responsibility.

The report recognizes two groups of addicts to whom administration of morphine or heroin may be regarded as legitimate medical treatment: The first group includes those who are undergoing treatment for the cure of addiction by the gradual withdrawal method, and the second includes those from whom, after every effort has been made for the cure of addiction, the drug can not be withdrawn completely. The latter group is divided into two classes, namely, those in whom complete withdrawal produces serious symptoms which can not be satisfactorily treated under the ordinary conditions of private practice, and those incapable of leading useful and fairly normal lives without taking a certain nonprogressive quantity of the drug. In this connection, however, the report emphasizes the necessity of keeping the supply of drug within the limits of what is actually required.

The possible necessity of prolonged or even life-long administration of these drugs was not universally held by physicians giving testimony. The fact that it was held by some authorities made it difficult to base action on the assumption that the continuous administration of non-diminishing doses was necessarily inconsistent with bona fide medical

treatment. It is apparent, however, that this phase of the subject is very much confused with and involved in the broader question of ambulant versus institutional management and treatment of drug addiction.

According to the modern conception, crystallized in socially and legally sanctioned laws respecting the use and abuses of opium, the individual who may require continuous and nonprogressive doses of morphine is unpopular and a menace to the social order. He becomes a medico-social problem demanding institutional segregation and treatment. In the United States the ambulant treatment for drug addiction is condemned as impracticable by majority medical opinion.

PRECAUTIONS TO BE OBSERVED IN PREVENTING ABUSES

In the matter of precautions to be observed by medical practitioners for avoiding abuses of morphine and heroin, the committee recommended consideration of the possibility of substituting nonhabit-forming drugs in lieu of morphine and heroin whenever possible. When the latter is essential, however, care must be taken not to give larger or more frequent doses than are strictly necessary to achieve the desired end. Cases requiring daily administration of morphine or heroin should be seen often by the practitioner, and the amount of drugs ordered or supplied should not exceed that required by the patient until seen again. Discretion of administration on the part of nurses should be strictly limited to prescription, and any change in treatment should be in writing. Patients should not be informed of the name or dose of the drug administered, and hypodermic administrations should be avoided if possible and never self-administered. Use of the drug should be discontinued immediately when no longer required; and if a craving has unfortunately resulted, close supervision and appropriate treatment should be maintained until the patient has been rendered independent of the drug.

The committee also pointed out that valuable results in the judicious use of morphine and heroin might be obtained through the medium of instruction to medical students, and medical men already in practice would welcome the issue of an authoritative memorandum affording guidance on this difficult and important subject. The committee recommended that such a memorandum be issued. The possibilities of the value of a similar memorandum applicable to the United States is worthy of consideration.

SOME DIFFICULTIES CORRECTED

The report comments that measures for securing observance of the above precautions are not wholly satisfactory. The physician's authorization to possess and to supply drugs can be withdrawn only after conviction under the dangerous drugs acts. The committee

therefore recommended that the Home Secretary have power to withdraw such authorization without conviction in courts, when advised by a suitably constituted medical tribunal. The committee therefore recommended the appointment of two suitably constituted medical tribunals, one for England and Wales, and one for Scotland, each group to be composed of three medical members with a legal assessor. The functions of these proposed tribunals would be to advise the Home Secretary when the authorization of a medical practitioner to possess and supply drugs might be properly withdrawn. Such tribunals would dispense with the necessity for conviction in court. Further recommendations involved the giving of power to the Home Secretary, under the dangerous drugs acts and regulations, to withdraw the right of prescribing these particular drugs in certain cases and under certain conditions, and contained the suggestion that the medical tribunals should advise the Home Secretary in cases of this character.

It was not believed necessary or desirable that the Home Office should be notified of persons to whom morphine or heroin was being administered continuously, but practitioners should obtain a second medical opinion before consenting to administer these drugs to such persons.

PREPARATIONS CONTAINING MORPHINE AND HEROIN

Since Great Britain assented to an international agreement (Geneva Conference, in February, 1925) bringing within the scope of the dangerous drugs legislation all preparations of heroin without distinction of percentage, the committee did not find it necessary to consider preparations containing heroin of percentage lower than that specified in the dangerous drugs acts as within the scope of its investigation.

However, there was believed to be very little abuse of preparations containing less than 0.2 per cent of morphine, with the possible exception of "chlorodyne," a preparation put on the market by several manufacturers, and containing morphine in varying strengths. Some witnesses considered that there was a possibility of abuse of chlorodyne, while others took the view that chlorodyne was a valuable domestic remedy. The committee concluded that it was not necessary to bring all preparations containing morphine within the scope of the dangerous drugs acts, or to lower the standard of strength at present fixed by the acts. It was considered advantageous that no preparation be sold under the name of chlorodyne which contains more than 0.1 per cent of morphine.

SOME PROVISIONS OF "DANGEROUS DRUGS ACTS AND REGULATIONS"

The report contains a short summary of the provisions of the dangerous drugs acts and regulations, and also pertinent comments on the system and difficulties of their administration. Some of these features may be considered briefly.

The dangerous drugs acts place restrictions on the import, export, manufacture, sale, distribution, supply, and possession of the drugs specified therein. The acts include morphine and heroin and preparations containing these drugs in more than a certain strength (morphine 0.2 per cent and heroin 0.1 per cent). The Secretary of State is empowered, with the approval of Parliament, to make regulations necessary for carrying the acts into effect. Under the regulations, the import, export, manufacture, sale, distribution or supplying of these drugs is restricted to persons licensed or authorized for such purposes.

Possession is restricted to persons so licensed or authorized; to persons supplied by registered medical practitioners for purpose of medical treatment or by registered veterinarians for the treatment of animals; and to those supplied by chemists on prescriptions issued by medical, dental, or veterinary practitioners. A registered medical practitioner is authorized to be in possession of the drugs and to supply them "so far only as is necessary for the practice of his profession."

Medical prescriptions for opium or its derivatives are required to be dated, to specify the total quantity of the drug to be supplied and to contain the name and address of the person for whom the drug is intended and the name and address of the prescribing physician. Authority exists for requiring an official form for use in prescribing "dangerous drugs," but that authority is not exercised. Medical practitioners dispensing medicines for their patients, and all others authorized to supply drugs, are required to keep a record of drugs purchased and issued. This does not apply to drugs administered by medical practitioners personally or by others under their immediate supervision. Practitioners who do not dispense but who may personally administer drugs are not required to keep a record even of their purchases. The committee recommended, however, that the latter be required to keep a simple record of their purchases.

Records kept by chemists and the pharmaceutical trade are inspected by Home Office inspectors or the police, and those kept by medical practitioners are inspected, on behalf of the Home Office, by the regional medical staff of the Ministry of Health in England and Wales, and by the medical staff and district medical officers of the Board of Health in Scotland. Through this system of inspection it is possible to trace the distribution of morphine and heroin imported or manufactured in the country.

CURRENT MALARIA STUDIES, WITH SPECIAL REFERENCE TO CONTROL MEASURES[1]

By L. L. WILLIAMS, Jr., *Surgeon, United States Public Health Service*

During the last three years malaria has increased both in amount and in severity in the Southern States. On the Atlantic seaboard, this increase is limited to the area south of North Carolina and in the Mississippi Valley south of Kentucky. Although the malaria rate had been steadily falling for many years, the reduction in 1925 was not very great and no apparent reduction occurred in 1926. In 1927 there was an upward trend, and in 1928 this became very marked. The reporting of malaria is so incomplete and the various measurements of malaria prevalence are so inadequate that we can only indicate the trend of the disease without being able to give exact figures. In areas where malaria is well reported, the reports of physicians show a very large increase in the number of cases; in a number of States the death rates have risen sharply. A few circumscribed epidemics have been reported and investigated in a number of States. Here and there haematuric and black water forms, cerebral and algid forms have suddenly appeared. Numbers of deaths from acute malaria have been reported.

During the last two years blood examinations have been made in a number of places. Infection rates varying from a little below 8 per cent to as high as 45 per cent have been found in thick films taken in the spring and late fall. One county in a rural section gave a rate of 33 per cent.

Malaria has always been heaviest in rural districts. Most malaria control work, however, has been urban. Heretofore the cost of controlling mosquito production in a town with a population of 1,000 has been about equal to the cost of controlling mosquito production about a single farm house. Rural inhabitants found this too expensive even to contemplate. The use of hydroelectric power is increasing rapidly in the malarious regions. The industrial development of the South largely hinges on cheap electric power. The heavy cost of malaria control on impounded waters is of necessity passed on to the consumers. Research in the field of malaria control has had, as its primary objective, a search for easier and less costly methods than the standard method of draining and oiling.

Although quinine will control the case rate in active malarial sickness, it has never been popular among our people; and, wherever attempted, it has required too large a personnel group and too much time, and the result has never been sufficiently striking to cause an extension of the measure. However, there is a ray of hope in attacking the parasite itself. Barber has observed the extraordinary power of

[1] Read at the Twenty-seventh Annual Conference of State and Territorial Health Officers with the United States Public Health Service, Washington, D. C., June 3, 1929.

minute doses of plasmochin in rendering nonviable the sexual forms of the malaria parasite. *Anopheles* fed on a good carrier who had been given two doses of 6 centigrams of plasmochin on two successive days failed to become infected. Then Barber gave one dose of only 2 centigrams of plasmochin to another carrier; after 24 hours none of the mosquitoes fed on that patient were infected. A number of mosquitoes were fed on a good carrier 1½ hours after a single dose of 1½ centigrams of plasmochin; no infection resulted. Barber's last observation was that mosquitoes failed to become infected when fed on a patient 24 hours after he had been given one dose of ½ centigram of plasmochin. All of the carriers employed in these experiments had abundantly infected *Anopheles* immediately before the plasmochin was taken.

As 10 centigrams of plasmochin a day is a safe dose for an adult, surely ½ centigram is within the limits of safety. Inclusion of plasmochin in "chill tonics" will probably reduce our malaria rate; for these tonics are taken all over the South, particularly in the rural sections where malaria is most prevalent.

It is not necessary for us, however, to wait for the general wholesale use of any drug. We can now control malaria in country districts by other means. Screens have been utilized by the well-to-do for years; but, because of their cost, they have not been put on the poorly-built farm homes or rickety tenant shacks. The problem of screening such homes was attacked by Coogle with splendid results well known to all of you. His rural screening program is now in effect in five or more States and was used in the post-flood public health work throughout the lower Mississippi Valley.

Coogle solved the problem by reducing the cost of screening. He eliminated factory overhead costs and corporation profits by placing the manufacture of screens under the local county health department. He reduced the cost of materials by not using frames for window screens and by devising a type of door which can be made in varying sizes and in any quantity, for there is no standard size for the doors of tenant shacks. Who has not seen doors propped open on poorly screened houses to permit better circulation of air on hot nights? What difference do a few more mosquitoes make in addition to those which have found ingress through chimney, cracks in the floor or wall, or holes in the screens? There is not much difference between "some mosquitoes" and "some more mosquitoes." But there is a great difference between "some mosquitoes" and "*no* mosquitoes." To complete the mosquito-proofing of a shack, one must hang a mothball cage in each chimney, floor holes must be covered with old tin; ceilings and walls must be covered with cotton sample paper which can be secured from the cotton factories or bought cheaply. Most tenants will do the papering themselves, using

roofing caps and short nails or tacks to hold it in place. Some of this paper has been in place for 5 years and is still serving its purpose. Very wide cracks can be covered, even such widths as allow weathering of the paper. It does not break easily when wet and on drying shrinks to its original size. Houses completely mosquito-proofed in this way give the tenants a new and unexpected source of comfort in the summer; they now take a very personal interest in proper maintenance of the screening. Accidental holes are covered and tears mended. The whole attitude has changed, and the screening program is a success. The cost of mosquito-proofing farm tenant shacks has been brought below $8 per house.

Any county health department with a revolving fund of as little as $1,000 may confidently go ahead and ultimately screen an entire county. The few necessary tools and tables may be bought and made, a small supply of lumber and screen purchased, one or more laborers employed, and the factory is ready for business. The sanitary inspector measures up the houses while the health officer contracts with the owners to screen their tenant shacks at, say, $10 per shack, to be paid for after the houses are screened. The money collected goes toward the next contract. The only precaution here advisable is to organize a committee of responsible people to pass upon the various contracts and see that the money is collected on completion of the work. It is not advisable to make a county health department act as a collection agency.

We have another attack against malaria—the prevention of the production of *Anopheles quadrimaculatus* by means of Paris green as an anopheline larvicide. LePrince and Johnson devised an economical method of distributing this dust. They used an inexpensive gasoline-driven electric generator wired to a light dust gun which, in turn, is connected by a flexible hose to a simple dust hopper. The whole outfit can be carried along with an outboard motor in a light motor car and can be set up by one man in a light row boat. Boats may be placed in each pond or a light boat can be carried on a trailer behind an auto and used on a number of ponds. The entire outfit, including the boat, may be assembled for not over $400 and can be operated by a single worker. The dust gun creates a cloud of Paris green and hydrated lime, the mixture used having a Paris green content of 15 per cent. The dust drifts in the wind and is known to kill larvæ over 600 feet distant. How much farther it will kill has not yet been determined. This method has been successfully used with outboard motor speeds of 10 to 15 miles per hour. Where long borrow pits or narrow swamps or canals parallel a road, the duster can be used from a truck. For very narrow, long, breeding areas, the converted garbage can as devised by LePrince and Johnson is perhaps best. They half fill a can with 5 per cent Paris green in hydrated lime, place on it a cover with two 1½-inch openings. The nozzle of

the dust gun is thrust into one opening and from the other flows a stream of dust-laden air averaging 1 pound of Paris green per minute. The flow can be slowed by partly closing the outlet.

One person using the above outfit and a few laborers with hand power knapsack dust guns can prevent the production of *Anopheles quadrimaculatus* from all or nearly all of the producing areas in a county at a cost within the reach of most of our southern counties. This method has appealed to at least one county and a practical demonstration and study of this method of county-wide control of production of *Anopheles quadrimaculatus* is now under way under the direction of Doctor Griffitts in Dougherty County, Ga. The exact results of this study, with unit costs, will be made available during the coming autumn.

The power duster is also in use on lakes impounded for hydroelectric purposes. Most of these ponds were cleared at great cost, leaving only a narrow rim of flotage at the shore line in which *Anopheles* production occurred. This rim of flotage was removed during the breeding season by lowering the pond level at the commencement of summer, thus stranding the débris and leaving a clean mud bank. However, this fluctuation soon became too wasteful of power and Griffitts's compressed air-oil-mixture was substituted. Now the power duster still further reduces the cost of short-line control.

None of these methods remove the necessity for clearing, the cost of which has run almost to the million-dollar mark in some projects. The clearing of one area in prospect will run over that figure—perhaps to $2,000,000. If such ponds were filled without clearing, the trees and brush would soon die, the bark would fall off, and in a period of 6 to 10 years these ponds would be no more of a malaria menace than if completely cleared before filling. The interest on $2,000,000 at 6 per cent is $120,000 per year, and is a charge on the consumers of power for all time. If these ponds are not cleared, *Anopheles quadrimaculatus* production could be prevented by Paris green from an airplane for between $50,000 and $100,000 per year, for not over 10 years, by which time the pond would have cleaned itself. Surely the maximum of $100,000 for 10 years is less than $120,000 a year forever.

Ross proved that malaria could be controlled; Gorgas, Carter, Von Ezdorf, and LePrince demonstrated practical control on a large scale; the health departments of our Southern States have secured malaria control in practically every urban community of any size in their States; it now remains to secure it in every rural section. We have weapons with which to attack the parasite, to prevent the access of mosquitoes to man, and to prevent the production of *Anopheles*. Whenever any or all of these measures become common practice in our southern counties, malaria will disappear.

COURT DECISIONS RELATING TO PUBLIC HEALTH

Discharge of sewage by borough in manner to overflow land enjoined.—(Pennsylvania Supreme Court; Freedman et al. *v.* Borough of West Hazleton, 146 A. 564; decided May 13, 1929.) The borough of West Hazleton discharged sewage, at a certain place in the borough, into an open ditch. This ditch extended over plaintiffs' land to a creek. The polluted fluid spread, at various points along the ditch, over the land of plaintiffs and caused the emission of offensive odors which created inconvenience and unhealthful conditions to families living along the ditch within the borough. In an injunction suit brought by the plaintiffs, whose land consisted of plotted building lots which were suitable and available for residential purposes, the trial court found the above facts. It was also proved that the sewer system, at the point where the sewage entered the ditch, was wholly inadequate and insufficient to prevent the discharge of the polluted waters upon the plaintiffs' property. The trial court concluded that there was a public and continuing nuisance and granted the relief prayed for by the plaintiffs. On appeal by the defendant borough, the supreme court affirmed the lower court's decree, saying that "The facts in this case and the law applicable to them fully support the findings and final decree of the court below."

Regarding the claim, put forth by the borough, that it had a prescriptive right to the use of the ditch over plaintiffs' land, it was held by the supreme court that such claim had no application. The court stated that, although the ditch had been openly used for that purpose since 1902, that fact constituted no defense to a proceeding by an individual for the removal of an unlawful nuisance which developed in later years from such use, and that "the right to maintain a public nuisance can not be acquired by prescription."

State board of health can not provide by rule that less than a majority shall constitute a quorum.—(New Jersey Supreme Court; Borough of Florham Park et al. *v.* Department of Health of New Jersey et al., 146 A. 354; decided June 5, 1929.) An application was made by certain residents of the borough of Florham Park to the mayor and council and the board of health of the borough for approval of a plan for the establishment of a cemetery in the borough. The application was rejected by both the mayor and council and the board of health. The residents then applied to the State board of health. A hearing was held by the State board, at which four members were present. At a later meeting of the State board, a permit was granted. At this later meeting six members were present, but only five were qualified to vote, as one of the members present was engineer for the borough. The State board of health, under the law, was composed of 11 members, and, at the time of the hearing and determination of the question presented, there were 11 qualified board members.

The statutes contained no provision regarding the number of the board that should constitute a quorum for the transaction of business, but the board was empowered to make rules. By rule, it had provided that five members should constitute a quorum.

The supreme court decided that the board could not so provide, but that the common-law rule of majority governed. The court said that "The State board being composed of 11 members, no less than a majority can constitute a quorum." It also stated that "A member who is disqualified can not be counted to make a quorum." It was argued that, since the board had power to adopt rules, it could change the rule with respect to a quorum, but this, the court held, was not so.

The action of the State board was set aside.

DEATHS DURING WEEK ENDED AUGUST 3, 1929

Summary of information received by telegraph from industrial insurance companies for the week ended August 3, 1929, and corresponding week of 1928. (From the Weekly Health Index, August 7, 1929, issued by the Bureau of the Census, Department of Commerce)

	Week ended Aug. 3, 1929	Corresponding week, 1928
Policies in force	74, 250, 817	71, 583, 582
Number of death claims	11, 677	12, 601
Death claims per 1,000 policies in force, annual rate	8. 2	9. 2

Deaths from all causes in certain large cities of the United States during the week ended August 3, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928. (From the Weekly Health Index, August 7, 1929, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Aug. 3, 1929		Annual death rate per 1,000, corresponding week, 1928	Deaths under 1 year		Infant mortality rate, week ended Aug. 3, 1929 [2]
	Total deaths	Death rate [1]		Week ended Aug. 3, 1929	Corresponding week, 1928	
Total (62 cities)	6, 219	11. 1	10. 7	625	622	[3] 55
Akron	32			6	3	62
Albany [4]	45	19. 5	18. 2	4	3	79
Atlanta	48	9. 8	16. 8	11	16	114
White	25			8	5	
Colored	23	(5)	(5)	3	11	
Baltimore [4]	198	12. 5	11. 5	25	17	80
White	148			23	10	93
Colored	50	(5)	(5)	2	7	32
Birmingham	68	16. 0	15. 0	13	11	118
White	31			6	4	90
Colored	37	(5)	(5)	7	7	160
Boston	183	12. 0	10. 9	22	22	61
Bridgeport	23			2	0	35
Buffalo	122	11. 5	11. 8	14	14	60
Cambridge	17	7. 1	7. 9	1	0	18
Canton	15	6. 7	7. 2	1	3	24
Chicago [4]	635	10. 5	9. 2	59	56	53
Cincinnati	123			16	12	93
Cleveland	227	11. 7	8. 9	15	13	44
Columbus	65	11. 4	13. 8	4	6	37

See footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended August 3, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928—Continued

City	Week ended Aug. 3, 1929		Annual death rate per 1,000, corresponding week, 1928	Deaths under 1 year		Infant mortality rate, week ended Aug. 3, 1929
	Total deaths	Death rate		Week ended Aug. 3, 1929	Corresponding week, 1928	
Dallas	43	10.3	10.8	7	4	
White	34			7	3	
Colored	9	(5)	(5)	0	1	
Dayton	43	12.2	9.1	6	2	95
Denver	71	12.6	13.0	6	7	58
Des Moines	21	7.2	10.7	0	4	0
Detroit	290	11.0	9.3	36	38	58
Duluth	17	7.6	8.1	1	4	24
El Paso	34	15.1	9.3	9	4	
Erie	18			1	1	20
Fall River [4]	25	9.7	6.2	2	1	38
Flint	21	7.4	8.8	7	3	85
Fort Worth	25	7.7	11.0	5	1	
White	21			5	0	
Colored	4	(5)	(5)	0	1	
Grand Rapids	28	8.9	9.6	3	4	45
Houston	60			6	9	
White	41			5	8	
Colored	19	(5)	(5)	1	1	
Indianapolis	88	12.0	9.6	13	8	104
White	73			10	8	93
Colored	15	(5)	(5)	3	0	179
Jersey City	63	10.1	9.7	9	11	70
Kansas City, Kans	30	13.3	12.8	3	4	66
White	21			2	2	50
Colored	9	(5)	(5)	1	2	179
Kansas City, Mo	91	12.2	11.5	8	5	67
Knoxville	33	16.4	13.9	8	3	175
White	23			5	3	122
Colored	10	(5)	(5)	3	0	633
Los Angeles	195			23	10	67
Louisville	50	7.9	14.3	8	11	65
White	34			6	9	56
Colored	16	(5)	(5)	2	2	126
Lowell	11			1	3	23
Lynn	15	7.4	7.4	3	0	82
Memphis	60	16.5	19.8	7	10	83
White	28			4	6	76
Colored	32	(5)	(5)	3	4	94
Milwaukee	104	10.0	10.7	14	9	61
Minneapolis	80	9.2	9.3	3	4	19
Nashville	52	19.5	22.1	9	12	145
White	24			4	10	87
Colored	28	(0)	(5)	5	2	314
New Bedford	21			2	2	43
New Haven	44	12.2	9.2	3	3	46
New Orleans	128	15.6	16.4	12	15	60
White	74			9	9	63
Colored	54	(5)	(5)	3	6	50
New York	1,239	10.8	9.9	119	107	49
Bronx Borough	162	8.9	8.3	16	10	47
Brooklyn Borough	408	9.2	8.4	41	42	42
Manhattan Borough	490	14.6	14.5	43	45	59
Queens Borough	143	8.8	6.5	12	8	49
Richmond Borough	36	12.5	11.1	2	2	36
Newark, N. J	95	10.5	9.3	8	11	42
Oakland	59	11.3	10.1	3	4	33
Oklahoma City	34			3	8	60
Omaha	60	14.1	12.9	5	2	58
Paterson	29	10.5	10.1	1	4	18
Philadelphia	372	9.4	10.5	19	35	27
Pittsburgh	138	10.7	10.8	16	15	55
Portland, Oreg	66			5	4	57
Providence	50	9.1	11.3	5	7	44
Richmond	49	13.2	12.4	9	11	126
White	29			4	2	85
Colored	20	(5)	(5)	5	9	205
Rochester	59	9.4	10.0	2	3	17
St. Louis	235	14.5	10.0	16	14	54
St. Paul	31			2	2	21
Salt Lake City [4]	39	14.8	12.9	2	4	31

See footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended August 3, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928—Continued

City	Week ended Aug. 3, 1929		Annual death rate per 1,000, corresponding week, 1928	Deaths under 1 year		Infant mortality rate, week ended Aug. 3, 1929 [2]
	Total deaths	Death rate [1]		Week ended Aug. 3, 1929	Corresponding week, 1928	
San Antonio	64	15.3	14.9	8	8	
San Diego	23			3	1	57
San Francisco	117	10.5	12.5	4	7	25
Schenectady	12	6.7	6.7	2	1	64
Seattle	76	10.4	10.6	7	6	74
Somerville	14	7.1	10.2	3	3	108
Spokane	33	15.8	13.4	3	3	78
Springfield, Mass	21	7.3	7.0	2	3	33
Syracuse	37	9.7	10.8	3	6	36
Toledo	53	8.8	12.4	4	10	37
Trenton	33	12.4	14.7	3	1	54
Utica	27	13.5	14.0	1	3	25
Washington, D. C	141	13.4	13.0	15	16	88
White	82			7	8	59
Colored	59	[5]	[5]	8	8	152
Waterbury	15			1	3	25
Wilmington, Del	35	14.2	11.8	5	4	130
Worcester	33	8.7	13.5	6	5	75
Yonkers	20	8.6	6.0	3	1	70

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 70 cities.
[4] Deaths for week ended Friday.
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond 32; and Washington, D. C., 25.

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

Reports for Weeks Ended August 3, 1929, and August 4, 1928

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 3, 1929, and August 4, 1928

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928
New England States:								
Maine	2	1			20	40	0	0
New Hampshire		1		10	13	11	0	0
Vermont					5	15	0	0
Massachusetts	54	29		4	49	133	4	3
Rhode Island	2	7		2	10	176	0	0
Connecticut	12	16	1	4	36	67	0	1
Middle Atlantic States:								
New York	126	134	[1] 4	[1] 3	162	363	17	15
New Jersey	62	52	5	2	29	98	7	3
Pennsylvania	104	103			179	487	5	7
East North Central States:								
Ohio	18	23	2	7	7	195	4	4
Indiana	15	11			67	30	0	0
Illinois	91	72	14	24	126	49	12	4
Michigan	88	61	1		66	63	45	4
Wisconsin	18	17	16	15	184	18	2	2
West North Central States:								
Minnesota	11	23		1	13	1	7	5
Iowa	2	9			13	6	0	1
Missouri	14	15			12	11	3	4
North Dakota	8	9			41	4	1	1
South Dakota	1	1		32	5	20	3	0
Nebraska	2	8			49	7	0	0
Kansas	7	7			54	14	3	2
South Atlantic States:								
Delaware					3		0	0
Maryland [2]	15	14	1	3	3	15	0	1
District of Columbia	6	13			2	19	0	0
Virginia								
West Virginia	3	8		7	23	9	1	1
North Carolina	45	14				13	3	1
South Carolina	20	11	119	154	1	8	0	0
Georgia	12		2	47	17	9	0	2
Florida	11	15		46	4	13	0	2
East South Central States:								
Kentucky		6				13	3	0
Tennessee	5	5		10		12	1	0
Alabama	13	10	7	37	5	6	1	0
Mississippi	19	3						

[1] New York City only.

[2] Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 3, 1929, and August 4, 1928—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928
West South Central States:								
Arkansas	1	1	----	7	----	5	0	0
Louisiana	12	8	5	4	6	16	2	0
Oklahoma [3]	10	3	----	44	14	7	1	1
Texas	28	15	13	4	10	6	4	2
Mountain States:								
Montana	9	3	----	----	45	28	0	2
Idaho	1	----	----	----	1	----	0	0
Wyoming	3	1	----	----	1	----	2	0
Colorado	6	6	----	----	8	10	0	2
New Mexico	2	2	1	1	4	----	3	0
Arizona	----	2	----	----	----	8	2	0
Utah [2]	1	1	----	1	1	----	1	0
Pacific States:								
Washington	6	10	----	----	30	16	2	0
Oregon	8	6	1	5	22	14	1	0
California	36	49	12	10	34	20	6	4

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928
New England States:								
Maine	0	1	6	10	0	0	2	2
New Hampshire	0	2	1	6	0	0	0	1
Vermont	1	0	4	0	3	0	0	0
Massachusetts	1	25	64	84	0	0	9	9
Rhode Island	0	0	1	4	0	0	1	0
Connecticut	0	3	11	10	0	0	10	0
Middle Atlantic States:								
New York	11	51	54	75	0	0	25	36
New Jersey	1	4	30	19	0	0	17	13
Pennsylvania	5	4	76	103	1	1	38	54
East North Central States:								
Ohio	1	4	46	35	15	14	18	51
Indiana	0	0	105	25	53	16	10	13
Illinois	1	3	78	61	14	7	41	21
Michigan	9	1	67	64	37	14	7	6
Wisconsin	0	2	26	72	15	9	2	3
West North Central States:								
Minnesota	0	4	17	46	2	0	5	1
Iowa	0	1	16	19	14	11	5	
Missouri	1	0	12	12	7	2	12	12
North Dakota	1	20	18	22	4	0	1	1
South Dakota	0	0	5	11	19	10	2	1
Nebraska	0	1	3	19	11	11	1	3
Kansas	1	0	17	32	12	12	18	19
South Atlantic States:								
Delaware	0	0	2	0	0	0	1	0
Maryland [2]	1	5	13	15	0	0	23	19
District of Columbia	0	1	4	5	0	0	5	0
Virginia	14	4	----	----	----	----	----	----
West Virginia	1	2	17	11	4	1	31	0
North Carolina	3	3	34	26	0	12	58	83
South Carolina	1	4	8	0	0	3	87	93
Georgia	0	0	5	4	0	0	43	53
Florida	0	1	4	5	0	0	2	4
East South Central States:								
Kentucky	1	3	17	22	5	0	18	4
Tennessee	6	2	11	5	6	0	74	69
Alabama	0	1	21	2	0	6	33	66
Mississippi	0	1	8	4	0	0	53	29

[2] Week ended Friday.
[3] Figures for 1929, are exclusive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 3, 1929, and August 4, 1928—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928	Week ended Aug. 3, 1929	Week ended Aug. 4, 1928
West South Central States:								
Arkansas	0	0	2	0	0	0	18	42
Louisiana	0	0	7	10	0	0	37	34
Oklahoma [3]	0	1	6	12	7	13	55	57
Texas	0	0	16	7	8	2	48	23
Mountain States:								
Montana	0	0	8	2	2	10	3	8
Idaho	1	0	0	1	5	2	5	0
Wyoming	0	0	3	2	8	0	0	0
Colorado	1	3	2	15	9	0	7	1
New Mexico	1	2	2	6	0	0	7	5
Arizona	0	0	0	0	0	1	3	3
Utah [2]	0	0	3	7	3	0	1	0
Pacific States:								
Washington	0	24	4	13	30	3	6	7
Oregon	1	2	0	8	8	17	5	12
California	1	6	65	49	10	12	23	16

[2] Week ended Friday.
[3] Figures for 1929 are exclusive of Oklahoma City and Tulsa.

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	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
June, 1929										
Colorado	7	26	1				0	63	67	15
Delaware		8			50		1	10	2	2
Massachusetts	19	271	11	4	2,138		4	649	6	22
Mississippi	2	42	377		11,166	3,085	3	37	2	184
Nevada					35				10	
July, 1929										
Connecticut	6	57	6	1	142		2	61	0	11
Nebraska	1	14	2		311		0	60	0	3
Porto Rico		40	11	752	168	6	0	1	0	69

June, 1929

	Cases
Chicken pox:	
Delaware	7
Massachusetts	957
Mississippi	262
Nevada	24
Dengue:	
Mississippi	28
Dysentery:	
Massachusetts	1
Mississippi (amebic)	185
Mississippi (bacillary)	3,364
German measles:	
Massachusetts	126
Hookworm disease:	
Mississippi	445
Lead poisoning:	
Massachusetts	4
Lethargic encephalitis:	
Massachusetts	2
Mumps:	
Delaware	3
Massachusetts	429
Mississippi	212
Nevada	2
Ophthalmia neonatorum:	
Massachusetts	103
Puerperal septicemia:	
Mississippi	31
Rabies in animals:	
Mississippi	2
Rocky Mountain spotted or tick fever:	
Colorado	5
Nevada	7
Septic sore throat:	
Massachusetts	40
Tetanus:	
Massachusetts	2
Trachoma:	
Massachusetts	9
Mississippi	5
Trichinosis:	
Massachusetts	1
Tularaemia:	
Nevada	3
Whooping cough:	
Delaware	33
Massachusetts	728
Mississippi	1,600
Nevada	1

June, 1929—Continued

	Cases
Whooping cough—Continued.	

July, 1929

	Cases
Anthrax:	
Connecticut	1
Chicken pox:	
Connecticut	84
Nebraska	30
Colibacillosis:	
Porto Rico	2
Dysentery:	
Porto Rico	59
Filariasis:	
Porto Rico	6
German measles:	
Connecticut	36
Nebraska	1
Leprosy:	
Porto Rico	1
Mumps:	
Connecticut	56
Nebraska	22
Porto Rico	11
Ophthalmia neonatorum:	
Porto Rico	2
Puerperal septicemia:	
Porto Rico	4
Rabies in animals:	
Connecticut	3
Septic sore throat:	
Connecticut	18
Nebraska	6
Tetanus:	
Connecticut	3
Porto Rico	8
Tetanus (infantile):	
Porto Rico	12
Trachoma:	
Porto Rico	1
Undulant fever:	
Connecticut	2
Whooping cough:	
Connecticut	140
Nebraska	87
Porto Rico	37

PLAGUE-INFECTED GROUND SQUIRRELS IN CALIFORNIA

The Director of Public Health of the State of California reports that on July 29, 1929, plague infection was proved in a lot of two ground squirrels from a ranch 3½ miles northwest of San Luis Obispo, Calif. The squirrels were received at the laboratory on July 20, 1929.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 93 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 30,920,000. The estimated population of the 89 cities reporting deaths is more than 29,875,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended July 27, 1929, and July 28, 1928

	1929	1928	Estimated expectancy
Cases reported			
Diphtheria:			
46 States	836	804	
93 cities	413	396	481
Measles:			
45 States	2,006	2,627	
93 cities	405	761	
Meningococcus meningitis:			
45 States	99	83	
93 cities	61	41	
Poliomyelitis:			
46 States	53	98	
Scarlet fever:			
46 States	1,077	741	
93 cities	355	244	285
Smallpox:			
46 States	416	310	
93 cities	36	12	18
Typhoid fever:			
46 States	778	897	
93 cities	106	130	143
Deaths reported			
Influenza and pneumonia:			
89 cities	301	253	
Smallpox:			
89 cities	0	0	

City reports for week ended July 27, 1929

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence the number of cases of the disease under consideration that 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 weeks 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 esimated expectancy is the mean number of cases reported for the week during non-epidemic years.

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1920 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviation 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, 1928, 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	78,600	0	1	0		0	2	0	0
New Hampshire:									
Concord	(1)	0	0	0		0	2	0	1
Nashua	(1)	0	0	0		0	0	0	0
Vermont:									
Barre	(1)	0	0	0		0	0	0	0
Massachusetts:									
Boston	799,200	9	27	19		1	22	18	7
Fall River	134,300	0	2	0		0	0	0	0
Springfield	149,800	4	1	3		0	3	1	0
Worcester	197,600	1	2	0		0	5	1	2
Rhode Island:									
Pawtucket	73,100	0	0	0		0	0	0	1
Providence	286,300	1	3	1		0	5	0	1
Connecticut:									
Bridgeport	(1)	0	3	1		0	1	2	1
Hartford	172,300	0	2	2		0	2	0	1
New Haven	187,900	0	1	0		0	3	0	0

[1]No estimate of population made.

City reports for week ended July 27, 1929—Continued

Division, State, and city	Population July 1, 1928, 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			
MIDDLE ATLANTIC									
New York:									
Buffalo	555,800	4	7	13		0	8	0	9
New York	6,017,500	15	123	99	4	2	23	41	61
Rochester	328,200	3	4	1		0	0	2	8
Syracuse	199,300	1	2	0		0	3	7	1
New Jersey:									
Camden	135,400	0	3	5	1	1	1	0	1
Newark	473,600	4	7	17		0	3	8	8
Trenton	139,000	1	1	0		0	5	0	2
Pennsylvania:									
Philadelphia	2,064,200	12	35	11	1	0	4	4	19
Pittsburgh	673,800	5	13	9		1	8	2	10
Reading	115,400	1	1	1		0	0	2	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	413,700	2	4	2		0	0	0	0
Cleveland	1,010,300	19	17	14		0	19	0	8
Columbus	299,000	0	2	0	1	0	13	0	2
Toledo	313,200	7	3	2		0	14	8	4
Indiana:									
Fort Wayne	105,300	0	1	3		0	0	0	1
Indianapolis	382,100	0	2	0		0	11	1	2
South Bend	86,100		0						
Terre Haute	73,500	0	0	0		0	0	1	0
Illinois:									
Chicago	3,157,400	19	49	95	2	3	106	2	28
Springfield	67,200	4	0	0		0	4	3	0
Michigan:									
Detroit	1,378,900	5	26	42		1	40	9	10
Flint	148,800	2	2	1		0	7	0	0
Grand Rapids	164,200	2	1	1		0	3	1	3
Wisconsin:									
Kenosha	56,500	0	0	1		0	4	1	0
Milwaukee	544,200	19	9	3	2	2	27	1	5
Racine	74,400	4	1	0		0	0	0	0
Superior	(1)	0	0	0		0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	116,800	2	1	2		0	2	1	1
Minneapolis	455,900	25	9	0		0	2	1	3
St. Paul	(1)	3	6	0		0	1	2	6
Iowa:									
Davenport	(1)	0	0	2			1	0	
Des Moines	151,900	0	1	0			0	0	
Sioux City	80,000	2	1	0			1	1	
Waterloo	37,100		0						
Missouri:									
Kansas City	391,000	2	2	0		1	2	1	2
St. Joseph	78,500	0	1	0		0	3	0	3
St. Louis	848,100	2	17	6			3	7	
North Dakota:									
Fargo	(1)		0						
Grand Forks	(1)	1	0	0			0	0	
South Dakota:									
Aberdeen	(1)	0	0	0			0	2	
Sioux Falls	(1)	0	0	1			0	0	
Nebraska:									
Omaha	222,800	0	2	1		0	3	0	2
Kansas:									
Topeka	62,800	1	0	0		0	4	6	0
Wichita	99,300	0	1	1		0	9	2	0
SOUTH ATLANTIC									
Delaware:									
Wilmington	128,500	0	1	0		0	1	0	0
Maryland:									
Baltimore	830,400	1	10	2	1	0	2	20	13
Cumberland	(1)	0	0	0		0	0	0	0
Frederick	(1)	0	0	0		0	0	0	0
District of Columbia:									
Washington	552,000	1	4	5		0	0	0	4
Virginia:									
Lynchburg	38,600	1	0	1		0	0	13	0
Norfolk	184,200	0	0	0		0	0	0	2
Richmond	194,400	0	2	1		1	2	2	3
Roanoke	64,600	0	0	0		0	0	0	1

[1] No estimate of population made.

City reports for week ended July 27, 1929—Continued

Division, State, and city	Population July 1, 1928, 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			
SOUTH ATLANTIC—con.									
West Virginia:									
Charleston	55,200	1	0	1		0	0	0	1
Wheeling	(1)	1	0	0		0	1	0	1
North Carolina:									
Raleigh	(1)	0	0	0		0	0	0	0
Wilmington	39,100	0	0	1		0	0	0	2
Winston-Salem	80,000	0	0	0		0	0	0	0
South Carolina:									
Charleston	75,900	1	0	0	13	0	0	0	4
Columbia	50,600	1	0	0		0	0	0	1
Georgia:									
Atlanta	255,100	0	2	4	7	0	1	0	0
Brunswick	(1)	0	0	0		0	0	0	1
Savannah	99,900	0	1	0		0	0	0	1
Florida:									
Miami	156,700	0	1	0	1	0	0	2	2
St. Petersburg	53,300		0			0			0
Tampa	113,400	0	0	0		1	2	0	0
EAST SOUTH CENTRAL									
Kentucky:									
Covington	59,000	0	0	0		0	1	0	0
Tennessee:									
Memphis	190,200	0	2	1		0	0	2	1
Nashville	139,600	0	1	0		0	0	0	1
Alabama:									
Birmingham	222,400	1	1	2		0	0	1	5
Mobile	69,600	0	0	1		0	0	0	0
Montgomery	63,100	0	0	0			0	0	
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	(1)	0	0	0					
Little Rock	79,200	0	0	0		0	0	0	1
Louisiana:									
New Orleans	429,400	0	4	8		0	2	0	8
Shreveport	81,300	0	0	0	0	1	0	2	3
Oklahoma:									
Oklahoma City	(1)	0	1	2	14	0	0	0	3
Tulsa	170,500	0	0	0			1	0	
Texas:									
Dallas	217,800	0	3	12		0	5	0	3
Fort Worth	170,600	0	1	1		0	0	0	1
Galveston	50,600	0	0	0		0	0	0	3
Houston	(1)	0	2	4		0	0	0	3
San Antonio	218,100	0	1	2		0	0	0	1
MOUNTAIN									
Montana:									
Billings	(1)	0	0	0		0	1	0	0
Great Falls	(1)	3	1	0		0	1	0	1
Helena	(1)	0	0	1		0	0	1	0
Missoula	(1)	0	0	0		0	0	0	0
Idaho:									
Boise	(1)	0	0	0		0	2	0	0
Colorado:									
Denver	294,200	12	9	0		1	3	3	5
Pueblo	44,200	4	1	0		0	0	0	0
New Mexico:									
Albuquerque	(1)	0	0	0		0	0	0	0
Utah:									
Salt Lake City	138,000	5	2	0		0	1	25	1
Nevada:									
Reno	(1)	0	0	0		0	0	0	0
PACIFIC									
Washington:									
Seattle	383,200	3	3	0			7	12	
Spokane	109,100	8	0	0			9	0	
Tacoma	110,500	1	2	1		0	0	0	1
Oregon:									
Portland	(1)	5	4	3		0	6	4	2
Salem	(1)	2	0	1				2	
California:									
Los Angeles	(1)	9	29	10	3	0	12	11	4
Sacramento	75,700	0	2	0		0	1	0	0
San Francisco	585,300	4	9	2		0	3	3	3

[1] No estimate of population made.

City reports for week ended July 27, 1929—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	3	0	0	0	0	0	1	0	6	9
New Hampshire:											
Concord	0	0	0	0	0	0	0	0	0	0	9
Nashua	0	0	0	0	0	0	0	0	0	0	8
Vermont:											
Barre	0	0	0	0	0	1	0	0	0	2	3
Massachusetts:											
Boston	13	14	0	0	0	6	2	7	1	59	171
Fall River	1	0	0	0	0	2	0	1	0	11	23
Springfield	2	0	0	0	0	0	0	0	0	0	20
Worcester	2	2	0	0	0	3	0	0	0	12	32
Rhode Island:											
Pawtucket	0	0	0	0	0	0	0	0	0	0	11
Providence	3	4	0	0	0	4	0	3	0	11	51
Connecticut:											
Bridgeport	2	2	0	0	0	2	0	1	0	0	29
Hartford	2	0	0	0	0	1	0	0	0	4	26
New Haven	1	0	0	0	0	1	1	0	0	3	36
MIDDLE ATLANTIC											
New York:											
Buffalo	6	4	1	0	0	9	1	0	0	19	97
New York	39	21	0	0	0	96	25	10	0	68	1,167
Rochester	3	1	0	0	0	0	1	0	0	5	59
Syracuse	2	1	0	0	0	1	0	0	0	43	36
New Jersey:											
Camden	0	0	0	0	0	0	1	0	0	2	35
Newark	5	3	0	0	0	6	1	0	0	67	75
Trenton	0	1	0	0	0	2	1	0	0	13	40
Pennsylvania:											
Philadelphia	22	0	0	0	0	40	7	4	0	112	372
Pittsburgh	11	7	0	0	0	8	3	1	1	35	162
Reading	0	2	0	0	0	1	0	0	0	3	22
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	4	14	0	1	0	10	2	3	1	9	135
Cleveland	12	9	0	0	0	14	3	0	0	79	173
Columbus	2	2	1	0	0	2	1	0	0	28	60
Toledo	2	1	1	2	0	3	1	2	0	21	77
Indiana:											
Fort Wayne	0	1	0	3	0	3	0	0	0	1	32
Indianapolis	2	16	2	1	0	2	1	0	0	15	88
South Bend	0		0				0				
Terre Haute	1	1	0	0	0	1	0	0	0	2	19
Illinois:											
Chicago	32	77	1	0	0	45	5	2	2	99	626
Springfield	0	0	0	0	0	2	0	3	1	5	21
Michigan:											
Detroit	27	36	2	0	0	24	4	4	1	109	237
Flint	4	6	0	20	0	3	0	0	0	8	25
Grand Rapids	3	1	1	0	0	1	1	0	0	24	39
Wisconsin:											
Kenosha	0	0	0	0	0	0	1	0	0	5	6
Milwaukee	7	7	0	0	0	5	0	0	0	93	93
Racine	1	1	0	0	0	0	0	0	0	0	8
Superior	2	1	0	0	0	0	0	0	0	3	7
WEST NORTH CENTRAL											
Minnesota:											
Duluth	4	5	0	0	0	1	0	0	0	10	21
Minneapolis	11	6	0	0	0	6	1	0	0	5	94
St. Paul	6	5	1	0	0	4	2	3	1	35	56
Iowa.											
Davenport	0	0	0	1			0	0		2	
Des Moines	1	5	1	1			0	0		1	28
Sioux City	0	0	0	0			0	0		5	
Waterloo	0		0				0				

City reports for week ended July 27, 1929—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—con.											
Missouri:											
Kansas City	2	3	0	0	0	5	2	0	0	4	8
St. Joseph	0	0	0	0	0	1	0	0	0	0	27
St. Louis	6	5	0	0	0	8	5	2	1	42	295
North Dakota:											
Fargo	1	----	0	----	----	----	0	----	----	----	----
Grand Forks	0	0	0	0	----	----	0	0	----	0	----
South Dakota:											
Aberdeen	0	1	0	2	----	----	0	0	----	1	----
Sioux Falls	0	0	0	6	----	----	0	0	----	0	10
Nebraska:											
Omaha	1	0	0	2	0	0	1	0	0	3	59
Kansas:											
Topeka	0	7	0	0	0	0	0	0	0	26	12
Wichita	1	6	0	0	0	1	2	0	0	1	22
SOUTH ATLANTIC											
Delaware:											
Wilmington	1	0	0	0	0	0	0	0	0	0	20
Maryland:											
Baltimore	5	22	0	0	0	15	7	7	1	74	189
Cumberland	1	0	0	0	0	0	0	0	0	2	10
Frederick	0	0	0	0	0	0	0	0	0	0	3
District of Columbia:											
Washington	4	3	0	0	0	7	3	2	0	6	115
Virginia:											
Lynchburg	0	0	0	0	0	1	1	0	0	38	14
Norfolk	0	0	0	0	0	7	1	2	1	7	----
Richmond	1	2	0	0	0	2	2	4	1	16	62
Roanoke	0	0	0	0	0	0	0	0	0	3	25
West Virginia:											
Charleston	0	0	0	0	0	3	1	0	0	6	16
Wheeling	1	0	0	0	0	0	0	0	0	4	12
North Carolina:											
Raleigh	0	1	0	0	0	0	0	0	0	11	7
Wilmington	0	1	0	0	0	0	0	0	0	3	18
Winston-Salem	0	1	0	0	0	2	1	2	0	16	24
South Carolina:											
Charleston	0	0	0	0	0	1	1	1	1	7	27
Columbia	0	0	0	0	0	2	1	0	0	14	22
Georgia:											
Atlanta	1	2	1	0	0	5	3	3	1	17	91
Brunswick	0	0	0	0	0	0	1	0	0	0	3
Savannah	0	0	0	0	0	0	2	1	1	0	29
Florida:											
Miami	0	0	0	0	0	1	0	1	0	0	23
St. Petersburg	0	----	0	----	0	0	0	----	0	----	12
Tampa	0	0	0	0	0	3	0	0	0	1	23
EAST SOUTH CENTRAL											
Kentucky:											
Covington	0	0	0	0	0	1	0	0	0	0	20
Tennessee:											
Memphis	0	2	0	1	0	6	9	0	1	13	64
Nashville	0	0	1	0	0	4	7	12	2	7	44
Alabama:											
Birmingham	1	1	1	0	0	3	5	1	1	3	59
Mobile	0	0	0	0	0	1	1	2	1	0	15
Montgomery	0	1	0	0	----	----	2	0	----	1	----
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	0	0	0	0	----	----	0	1	----	0	----
Little Rock	0	0	0	0	0	3	1	0	0	0	----
Louisiana:											
New Orleans	2	6	0	0	0	15	4	9	1	1	13
Shreveport	0	1	0	0	0	0	2	0	0	4	2

City reports for week ended July 27, 1929—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—contd.											
Oklahoma:											
Oklahoma City	1	1	0	0	0	1	3	1	0	0	38
Tulsa	0	0	0	1	----	----	3	1	----	5	----
Texas:											
Dallas	2	5	0	0	0	2	3	6	1	4	53
Fort Worth	1	0	1	1	0	4	1	2	1	----	35
Galveston	0	1	0	0	0	1	0	0	0	0	15
Houston	1	2	0	0	0	3	1	0	0	0	75
San Antonio	1	0	0	2	0	8	2	2	0	0	52
MOUNTAIN											
Montana:											
Billings	0	0	0	0	0	0	0	0	0	0	2
Great Falls	0	2	0	0	0	1	0	0	0	6	6
Helena	0	0	0	0	0	0	0	0	0	0	2
Missoula	0	0	0	0	0	0	0	0	0	0	5
Idaho:											
Boise	0	0	0	1	0	0	0	0	0	0	3
Colorado:											
Denver	3	0	0	0	0	6	1	2	0	12	66
Pueblo	1	0	0	0	0	0	0	2	0	0	6
New Mexico:											
Albuquerque	0	0	0	0	0	4	0	0	0	0	10
Utah:											
Salt Lake City	1	1	0	0	0	2	1	1	0	15	34
Nevada:											
Reno	0	0	0	0	0	0	0	0	0	0	3
PACIFIC											
Washington:											
Seattle	2	0	1	4	----	----	0	0	----	29	----
Spokane	0	0	2	0	----	----	0	0	----	13	----
Tacoma	1	0	1	4	0	0	0	0	0	5	19
Oregon:											
Portland	2	3	6	5	0	2	1	0	0	0	59
Salem	0	0	0	0	----	----	0	0	----	0	----
California:											
Los Angeles	10	14	4	0	0	25	4	2	1	39	229
Sacramento	1	3	1	1	0	3	1	0	0	15	28
San Francisco	4	10	0	0	0	9	2	1	0	8	136

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts:									
Boston	1	0	0	0	0	0	1	0	0
Worcester	0	1	0	0	0	0	0	0	0
MIDDLE ATLANTIC									
New York:									
Buffalo	0	1	0	0	0	0	0	1	0
New York	16	10	5	0	0	0	12	2	1
New Jersey:									
Newark	0	0	1	0	0	0	0	0	0
Pennsylvania:									
Philadelphia	1	1	0	0	2	0	0	0	0

City reports for week ended July 27, 1929—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio:									
Cleveland	0	0	1	0	0	0	1	1	0
Toledo	1	3	0	0	0	0	0	0	0
Indiana:									
Indianapolis	1	2	0	0	0	0	0	0	0
Illinois:									
Chicago	5	5	0	0	0	0	1	0	0
Michigan:									
Detroit	14	8	0	1	0	0	1	5	2
Wisconsin:									
Milwaukee	1	1	0	0	0	0	0	0	0
Racine	2	1	0	0	0	0	0	0	0
Superior	0	0	0	1	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	1	0	0	0	0	0	0	0	0
St. Paul	0	0	0	0	0	0	0	2	0
Missouri:									
Kansas City	3	0	0	0	0	0	0	0	0
St. Louis	2	1	0	0	0	0	0	0	0
SOUTH ATLANTIC [2]									
Delaware:									
Wilmington	0	0	0	0	0	0	0	1	0
Maryland:									
Baltimore	1	0	0	0	0	0	1	0	0
Virginia:									
Richmond	0	0	0	0	0	0	0	1	0
Roanoke	0	0	0	0	0	0	0	13	1
West Virginia:									
Wheeling	1	0	0	0	0	0	0	0	0
North Carolina:									
Raleigh	0	0	0	0	0	1	0	0	0
Winston-Salem	0	0	0	0	0	0	0	1	0
South Carolina:									
Charleston [1]	0	0	0	0	2	1	0	0	0
Columbia	0	1	0	0	0	1	0	0	0
Georgia:									
Atlanta	0	1	0	0	0	0	0	0	0
Brunswick	0	0	0	0	0	1	0	0	0
Savannah [2]	0	0	0	0	3	2	0	0	0
EAST SOUTH CENTRAL [3]									
Tennessee:									
Memphis	0	0	0	0	0	2	0	0	0
Alabama:									
Birmingham	0	1	0	0	0	0	0	0	0
Mobile	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
New Orleans	2	1	0	0	2	1	1	0	0
Oklahoma:									
Oklahoma City	0	0	0	1	0	1	0	0	0
Tulsa	1		0		0		0	0	
Texas:									
Fort Worth	0	0	0	0	0	2	1	0	0
Houston	0	0	0	0	0	1	0	0	0
San Antonio [1]	1	0	0	0	0	0	0	0	0
MOUNTAIN									
Colorado:									
Denver	0	1	0	0	0	0	0	0	0
Utah:									
Salt Lake City	4	3	0	0	0	0	0	0	0

[1] Dengue: 1 case at Charleston, S. C., and 4 cases at San Antonio, Tex.
[2] Typhus fever: 1 case at Savannah, Ga., 1 case at Miami, Fla., and 4 cases at Tampa, Fla.
[3] Rabies (human): 1 death at Covington, Ky.

City reports for week ended July 27, 1929—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
PACIFIC									
Washington:									
Spokane	1	--------	0	--------	0	--------	0	0	--------
California:									
Los Angeles	1	1	0	0	0	0	0	1	0
Sacramento	2	0	0	0	0	0	0	0	0
San Francisco	2	2	2	2	0	0	1	0	1

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended July 27, 1929, compared with those for a like period ended July 28, 1928. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have estimated aggregate populations of more than 31,000,000. The 91 cities reporting deaths have nearly 30,000,000 estimated population. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, June 25 to July 27, 1929—Annual rates per 100,000 population, compared with rates for the corresponding period of 1928 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	June 29, 1929	June 30, 1928	July 6, 1929	July 7, 1928	July 13, 1929	July 14, 1928	July 20, 1929	July 21, 1928	July 27, 1929	July 28, 1928
98 cities	110	115	90	88	[2] 89	85	[3] 74	70	[4] 69	[5] 68
New England	95	64	70	62	[6] 83	80	[7] 82	46	59	46
Middle Atlantic	144	187	101	148	99	116	76	90	75	81
East North Central	131	116	127	79	[8] 120	82	105	76	[8] 104	64
West North Central	85	53	77	29	69	53	[9] 59	53	[10] 20	59
South Atlantic	34	40	34	55	43	63	30	50	28	67
East South Central	34	7	27	21	41	7	27	35	27	49
West South Central	71	49	75	16	87	41	[11] 76	57	103	69
Mountain	26	35	26	27	[12] 28	71	17	35	9	62
Pacific	87	74	45	49	42	72	42	54	32	[5] 57

MEASLES CASE RATES

98 cities	268	500	196	327	[2] 151	267	[3] 100	165	[4] 70	[5] 130
New England	213	911	210	722	[6] 194	777	[7] 148	504	102	651
Middle Atlantic	99	655	76	456	51	350	47	204	27	126
East North Central	619	473	474	266	[8] 354	214	210	145	[8] 151	83
West North Central	256	383	113	172	104	117	[9] 61	63	[10] 59	29
South Atlantic	137	375	73	256	49	134	43	98	17	75
East South Central	7	175	27	56	14	224	7	77	7	98
West South Central	162	32	71	20	63	24	[11] 5	4	28	0
Mountain	148	399	148	354	[12] 92	239	61	186	70	80
Pacific	214	95	142	38	157	26	112	20	80	[5] 54

See footnotes at end of table.

Summary of weekly reports from cities, June 23 to July 27, 1929—Annual rates per 100,000 population, compared with rates for the corresponding period of 1928—Continued

SCARLET FEVER CASE RATES

	Week ended—									
	June 29, 1929	June 30, 1928	July 6, 1929	July 7, 1928	July 13, 1929	July 14, 1928	July 20, 1929	July 21, 1928	July 27, 1929	July 28, 1928
98 cities	113	104	88	74	[3] 83	52	[3] 64	56	[4] 59	[5] 42
New England	120	189	90	122	[6] 78	87	[7] 57	78	59	57
Middle Atlantic	72	100	46	59	41	37	35	33	19	27
East North Central	191	116	173	95	[8] 162	71	103	88	[8] 111	56
West North Central	104	113	38	90	79	35	[9] 61	72	[10] 73	61
South Atlantic	62	73	60	65	64	34	69	29	60	38
East South Central	34	21	54	35	48	49	54	14	27	14
West South Central	43	41	24	36	43	28	[11] 71	32	59	20
Mountain	70	71	44	27	[12] 9	62	78	44	26	27
Pacific	170	87	140	61	92	74	67	79	67	[5] 71

SMALLPOX CASE RATES

98 cities	15	10	15	6	[3] 9	7	[3] 14	4	[4] 7	[5] 2
New England	0	0	0	0	[6] 0	0	[7] 0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	38	8	41	6	[8] 19	7	32	3	[8] 16	1
West North Central	19	31	13	16	15	12	[9] 23	14	[10] 4	4
South Atlantic	2	2	2	8	2	0	2	6	0	0
East South Central	7	14	20	7	7	7	7	14	7	35
West South Central	4	8	12	4	16	4	[11] 0	4	8	0
Mountain	113	142	35	44	[12] 37	89	44	18	9	18
Pacific	15	20	25	15	10	31	35	10	22	[5] 3

TYPHOID FEVER CASE RATES

98 cities	12	16	10	14	[3] 14	17	[3] 18	18	[4] 18	[5] 22
New England	9	23	5	9	[6] 5	14	[7] 9	7	29	11
Middle Atlantic	7	8	6	9	7	9	10	12	7	17
East North Central	3	6	4	4	[8] 7	11	8	7	[8] 8	5
West North Central	15	12	13	8	10	16	[9] 23	12	[10] 10	23
South Atlantic	30	34	32	21	7	38	32	31	37	36
East South Central	34	140	48	91	156	70	143	140	102	140
West South Central	35	41	8	65	87	65	[11] 71	89	71	105
Mountain	52	27	17	9	[12] 9	9	52	9	44	27
Pacific	20	8	7	26	2	22	5	18	7	[5] 17

INFLUENZA DEATH RATES

91 cities	5	7	2	9	[3] 3	6	[3] 3	5	[4] 3	5
New England	2	5	0	9	[6] 2	5	[7] 0	9	2	5
Middle Atlantic	4	6	3	10	2	3	2	4	2	2
East North Central	4	5	1	3	[8] 3	4	3	5	[8] 4	6
West North Central	0	12	0	12	0	6	[9] 0	3	[10] 3	3
South Atlantic	4	6	2	6	4	8	6	8	4	6
East South Central	15	54	15	31	7	8	0	0	0	23
West South Central	4	12	4	25	4	25	[11] 20	4	4	12
Mountain	44	18	0	18	[12] 28	18	0	9	9	9
Pacific	3	3	0	0	0	10	3	3	0	0

See footnotes at end of table.

Summary of weekly reports from cities, June 23 to July 27, 1929—Annual rates per 100,000 population, compared with rates for the corresponding period of 1928—Continued

PNEUMONIA DEATH RATES

	Week ended—									
	June 29, 1929	June 30, 1928	July 6, 1929	July 7, 1928	July 13, 1929	July 14, 1928	July 20, 1929	July 21, 1928	July 27, 1929	July 28, 1928
91 cities	64	77	63	73	[3] 55	61	[8] 57	58	[4] 50	44
New England	59	71	50	51	[6] 32	67	[7] 70	55	32	34
Middle Atlantic	65	89	67	89	62	72	65	60	57	51
East North Central	69	63	56	67	[8] 51	54	40	57	[8] 38	29
West North Central	48	70	63	55	51	40	[9] 39	40	[10] 52	31
South Atlantic	62	71	69	61	58	52	54	50	60	71
East South Central	74	123	74	69	30	54	52	61	52	84
West South Central	69	71	114	58	85	71	[11] 74	54	89	58
Mountain	104	71	61	53	[12] 46	62	96	80	61	80
Pacific	39	81	33	78	56	54	66	81	26	10

[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, 1929 and 1928, respectively.
[2] Hartford, Conn., South Bend, Ind., and Great Falls, Mont., not included.
[3] Barre, Vt., Kansas City, Mo., and San Antonio, Tex., not included.
[4] South Bend, Ind., Waterloo, Iowa, and Fargo, N. Dak., not included.
[5] Seattle and Spokane, Wash., not included.
[6] Hartford, Conn., not included.
[7] Barre, Vt., not included.
[8] South Bend, Ind., not included.
[9] Kansas City, Mo., not included.
[10] Waterloo, Iowa, and Fargo, N. Dak., not included.
[11] San Antonio, Tex., not included.
[12] Great Falls, Mont., not included.

Number of cities included in summary of weekly reports and aggregate population of cities of each group, approximated as of July 1, 1929 and 1928, respectively

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	
			1929	1928	1929	1928
Total	98	91	31,568,400	31,052,700	29,995,100	29,498,600
New England	12	12	2,305,100	2,273,900	2,305,100	2,273,900
Middle Atlantic	10	10	10,809,700	10,702,200	10,809,700	10,702,200
East North Central	16	16	8,181,900	8,001,300	8,181,900	8,001,300
West North Central	12	9	2,712,100	2,673,300	1,736,900	1,708,100
South Atlantic	19	19	2,783,200	2,732,900	2,783,200	2,732,900
East South Central	6	5	767,900	745,500	704,200	682,400
West South Central	8	7	1,319,100	1,289,900	1,285,000	1,256,400
Mountain	9	9	598,800	590,200	598,800	590,200
Pacific	6	4	2,090,600	2,043,500	1,590,300	1,551,200

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended July 20, 1929.—The Department of Pensions and National Health reports cases of certain communicable diseases from six provinces of Canada for the week ended July 20, 1929, as follows:

Disease	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Influenza		1					1
Lethargic encephalitis			1				1
Poliomyelitis		1	1		1	4	7
Smallpox		13	1			2	16
Typhoid fever	20	5		1	1		27

Quebec Province—Communicable diseases—Week ended July 27, 1929.—The Bureau of Health of the Province of Quebec reports cases of certain communicable diseases for the week ended July 27, 1929, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	3	Mumps	8
Chicken pox	46	Scarlet fever	56
Diphtheria	44	Tuberculosis	66
German measles	1	Typhoid fever	28
Measles	32	Whooping cough	57

CUBA

Habana—Communicable diseases—July, 1929.—During the month of July, 1929, certain communicable diseases were reported in the city of Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Chicken pox	4		Measles	22	
Diphtheria	20	1	Scarlet fever	4	
Leprosy	1		Tuberculosis	69	42
Malaria	13	1	Typhoid fever	65	5

DENMARK

Communicable diseases—April, 1929.—During the month of April, 1929, communicable diseases were reported in Denmark as follows:

April, 1929

Disease	Cases	Disease	Cases
Bronchopneumonia	2,273	Paratyphoid fever	27
Cerebrospinal meningitis	10	Pneumonia	423
Chicken pox	40	Poliomyelitis	3
Diphtheria	328	Puerperal fever	16
Erysipelas	230	Scarlet fever	63
Influenza	12,002	Tetanus	4
Jaundice	117	Tuberculosis	326
Lethargic encephalitis	13	Typhoid fever	13
Measles	264	Undulant fever [1]	42
Mumps	2,408	Whooping cough	950

[1] Reported from State Serum Institute.

Population 3,537,805.

JAMAICA

Communicable diseases—Four weeks ended July 20, 1929.—During the four weeks ended July 20, 1929, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the Island of Jamaica, outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chicken pox	1	22	Smallpox (alastrim)		7
Diphtheria		1	Tuberculosis	34	54
Dysentery	1	4	Typhoid fever	29	69
Puerperal fever		3			

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

From medical officers of the Public Health Service, American consuls, health section of the League of Nations, and other sources. The reports contained in the following table must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given:

CHOLERA

[C indicates cases; D, deaths; P, present]

Place		Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Mar. 10–Apr. 6, 1929	Apr. 7–May 4, 1929	Week ended— May, 1929			June, 1929					July, 1929			
						11	18	25	1	8	15	22	29	6	13	20	27
Ceylon	C		4			2	1										
	D		4			2	1										
Colombo	C	2			1				3				1				
	D					1			2				1				
China:																	
Amoy	C											3	1				
Canton	C			3	3	1			1	1		5	4	3	1		2
	D				3	1						3	2	3	1		1
Shanghai	C													1		P	
Swatow	C											P					
	D											4		2	1		
India	C	12,566	7,627	9,046	18,521	6,979	7,973	7,379	8,285	8,406	7,329						
	D	7,912	4,425	4,997	11,069	4,469	4,996	4,935	5,911	5,943	4,815						
Bassein	D	6	6	45	118	23	13	1	1	1	1						
Bombay	C	1		6	3					1	1						
	D		1	2		1	1			1	1						
Calcutta	C	129	261	552	788	274	245	244	161	98	83	74					
	D	85	144	307	461	175	156	171	103	65	53	7	51	41	29		
Madras	C	4	9			1											
	D	5	4														
Moulmein	D		1	7	6		6	11	14	5							
Negapatam	C	18	3														
Rangoon	C	15	13	15	8	4	4	2	3	1	3						
	D	9	6	37	10	2	3	1	1	2	2	3	1				
Tuticorin	C	85	6								15		4	4	2		
	D	52	4								12	10	8		2		
India (French):																	
Chandernagor	C			3	3	1		1	1	1	1		1	1			
	D			3	1	1		1	1	1	1		1	1			
Karikal	C	150	88	20	3												
	D	128	71	15	3												
Pondicherry Province	C	129	86	46			1	1	1	1	1		1				
	D	104	74	38				1		1	1		1				

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

CHOLERA—Continued

[C indicates cases; D, deaths; P, present]

Place		Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Mar. 10–Apr. 6, 1929	Apr. 7–May 4, 1929	Week ended— May, 1929			June, 1929					July, 1929			
						11	18	25	1	8	15	22	29	6	13	20	27
Indo-China (see also table below):																	
Pnompenh	C	2	42	13	15	5	3	------	6	2	2	2	5	2	2	------	------
	D	1	36	10	9	5	1	------	4	1	1	------	2	1	1	------	------
Saigon and Cholon	C	6	------	12	13	17	15	20	19	43	73	55	17	9	6	------	------
	D	3	------	2	8	15	9	9	4	29	53	49	8	8	4	------	------
Siam	C	195	165	397	619	310	196	------	113	121	67	122	159	214	49	------	------
	D	138	117	269	404	193	136	------	107	78	53	59	95	112	38	------	------
Anthoang	C	1	3	------	------	------	------	------	------	------	------	------	------	------	------	------	------
	D	1	2	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Ayudhaya	C	4	4	1	29	2	------	------	------	14	------	11	------	------	------	------	------
	D	4	4	1	19	------	------	------	------	8	------	3	------	------	------	------	------
Bangkok	C	50	61	38	111	66	36	20	9	7	8	9	6	------	2	------	------
	D	43	36	21	74	34	22	17	4	2	4	5	2	------	1	------	------
Chaxoengsao	C	9	1	------	------	------	1	------	------	------	------	------	------	------	------	------	------
	D	9	1	------	------	------	1	------	------	------	------	------	------	------	------	------	------
Dhannapuri	C	3	3	------	17	------	------	------	------	------	------	------	------	------	------	------	------
	D	2	1	------	7	------	------	------	------	------	------	------	------	------	------	------	------
Lobpuri	C	------	3	------	1	------	------	------	------	------	------	------	------	------	------	------	------
	D	------	1	------	1	------	------	------	------	------	------	------	------	------	------	------	------
Nagara Pathom	C	------	2	------	36	------	13	------	------	------	------	------	------	------	------	------	------
	D	------	2	------	20	------	10	------	------	------	------	------	------	------	------	------	------
Pradhumdham	C	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
	D	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Singhapuri	C	6	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------
	D	7	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Smud Prakar	C	10	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------
	D	8	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
On vessel:																	
S. S. Angby, at Saigon-Cholon	C	------	------	------	------	------	------	------	------	------	1	------	------	------	------	------	------
	D	------	------	------	------	------	------	------	------	------	1	------	------	------	------	------	------
S. S. Cap. St. Jacques, at Singapore from Saigon-Cholon	C	------	------	------	------	------	------	------	------	------	------	------	------	P	------	------	------
S. S. Ekma, at Penang from Singapore	C	------	P	------	------	------	------	------	------	------	------	------	------	------	------	------	------
S. S. Elephanta, at Penang from Calcutta	C	------	------	P	------	------	------	------	------	------	------	------	------	------	------	------	------

S. S. Erinpura, at Madras	C						1	2									
S. S. Media, at Colombo from Calcutta	C						1										
S. S. Saka Maru, at Calcutta	C						6										
S. S. Tilawa, at Penang from Singapore	C			P													
S. S. Tokushima, at Hong Kong	C											2					
	D											2					

Place		January, 1929	February, 1929	March, 1929	April, 1929			May, 1929			June, 1929			July, 1-10, 1929
					1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20	21-30	
Indo-China (French) (see also table above):														
Annam	C			6		13	7	15	5					2
Cambodia	C	79	69	29		40	44	27	188					55
Cochin-China	C	660	223	183		51	37	81	42					146
Tonkin	C							3	2					

PLAGUE

[C indicates cases; D, deaths; P, present]

Place		Jan. 13-Feb. 9, 1929	Feb. 10-Mar. 9, 1929	Mar. 10-Apr. 6, 1929	Apr. 7-May 4, 1929	Week ended—										Aug. 3, 1929
						May, 1929			June, 1929					July, 1929		
						11	18	25	1	8	15	22	29	6	13	20	27	
Algeria: Philippeville	C																3	
Argentina:																		
Buenos Aires	C			2	1													
	D			2														
Jujuy Province—Perico	C	3																
Rosario	C	1		31	5													
Azores: St. Michaels Island	C	1		1														
Belgian Congo: Djugu	C	1	4			2						3						
	D	1	1			3						3						
Brazil:																		
Para	C	1																
Porto Alegre	C				1													
British East Africa (see also table below):																		
Uganda	C	152	112	130	231	87	86	117	160	255	357							
	D	149	108	124	219	81	86	100	142	193	259							

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

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Mar. 10–Apr. 6, 1929	Apr. 7–May 4, 1929	Week ended— May, 1929			June, 1929					July, 1929				Aug. 3, 1929
						11	18	25	1	8	15	22	29	6	13	20	27	
Canary Islands:																		
Tenerife	D														1			
Laguna	C	1							1									
Ceylon: Colombo	C	6	4	4	5	2	1	1	3			1	1		P	P		
	D	5	3	1	4	2	1	1	2		1	1	1					
Plague-infected rats		2	2		1									1				
China:																		
Hainan	C	P	1															
Manchuria—Mungliao District	C																P	
Suyuan Province	C	P	1															
Dutch East Indies:																		
Celebes—Makassar—Plague-infected rats		1																
Java—																		
Batavia and West Java	C	74	70	64	63		16	20	22	13	14	8						
	D	73	69	65	63		16	19	21	13	14	8						
Plague-infected rats			4	5	8													
East Java and Madura	C			3														
	D			3														
Surabaya	C	6																
	D	6																
Kediri Residency	C	P																
Ecuador (see table below).																		
Egypt:																		
Alexandria	C	3				1							1	2		3	2	1
	D	1									1			1			1	
Asuan	C														1	1	2	
	D														1	1	2	
Beheira	C																2	
	D																2	
Beni Suef	C	3	4	2	7					3			3	1	1	1	1	1
	D	3	1	2	2					1			1					
Daqahliya	C						3	4	2	1							1	
	D								1									
Gharbia	C													1	5	1	2	
	D														1			

Girga	C													2	1				
Kena	C													1	1				
	D													1	1				
Miniah	C															4	3		
Port Said	C				2	1		1	1		1	1		1	1	1			
	D				1	1		1		1				1					1
Suez	C		1	2															
Greece (see table below).																			
Hawaii: Hamakua—Kukuihaele—Plague-infected rats											1								
India	C	12,600	16,570	16,011	6,884	620	378	203	193	128	121								
	D	9,815	12,064	12,592	5,623	522	344	155	184	88	77								
Bassein	D	4	3	6	3		2					1	3	1	3				
Bombay	C	2	4	8	8		1												
	D	4	4	6	6			1			1	3							
Plague-infected rats		38	38	57	81		23	9	12	10	9	7	9	6	7	4			
Madras Presidency	C	434	333	132	38	4	21	19	20				15						
	D	235	189	80	14		8	25	7				8						
Rangoon	C	4	4	12	11	1	1												
	D	5	4	9	15	1	2		2	1	3	2	3	3	3	8			
Plague-infected rats		5	11	15	10		2	2	1	1		3	2	4	2				
Indo-China (see also table below):																			
Pnompenh	C	10	5	10	8	1	4			1	1		2	5		2			
	D	9	3	10	8	1	2			1	1		1	5					
Saigon and Cholon	C		1									1		5					
Tourane	C		5											3					
Iraq:																			
Baghdad	C	6	10	11	8	5	4	1	4	2	1	7	2		1				
	D	3	3	3	7	2	8					2							
Plague-infected rats		6	22	14	2		1												
Diyalah Liwa	C				7				12	P	1			1					
	D				7				7										
Naudham	C	2								1					1				
	D	1																	
Plague-infected rats		1																	
Japan: Osaka—Plague-infected rats							2												
Madagascar (see also table below):																			
Tamatave	C	1							P	1	1			2	2				
	D		2	1	1						1	1							
Plague-infected rats											2	2				15			
Morocco	C			106	31	4	6	29	3	4		5	7	3		6			
	D			73	16	1	3			4		1							
Nigeria: Lagos	C	14	11	4	8	1	2	1	1	1		1							
	D	12	11	4	8	1	2		1			1							
Plague-infected rats		48	50	18	6		3	1	4	4									
Peru (see table below).																			
Senegal (see table below).																			
Siam	C	45	9	9	10	4	1		4	1									
	D	17	9	8	8	3			2	1									
Bangkok	C	1	1			1	1												
	D	2	1			1													
Nagara Pathom	C		3	4	2	3													
	D		2	4	2	2													

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

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Mar. 10–Apr. 6, 1929	Apr. 7–May 4, 1929	Week ended— May, 1929			June, 1929					July, 1929				Aug. 3, 1929
						11	18	25	1	8	15	22	29	6	13	20	27	
Straits Settlements: Singapore	C		1		1													
	D		1		1													
Tunisia: Tunis	C															P	P	
Turkey: Constantinople	C											P						
Union of Socialist Soviet Republics:																		
Caucasia	C												1	3				
	D												1	3				
Ural–Kirghiz	C									P	2		2					
	D										2		2					
Union of South Africa:																		
Cape Province	C			1	2													
	D			1	1													
Orange Free State	C	6	2	3	4													
	D	1		2	1													
Transvaal	C			8														
	D			8														
Uruguay: Montevideo	C			4														
On vessel:																		
S. S. Chenonceaux, at Singapore, from Colombo	C			1														
	D			1														
S. S. Tokio, at Shanghai, from Singapore	C																1	
	D																1	
S. S. Ganzan Maru, at Osaka, from Haipong	C					1												
S. S. Seigo Maru, at Osaka, from Bombay—Plague-infected rats						1												
S. S. Soudades, at Hamburg from Rosario, Argentina—Plague-infected rats					2													
S. S. Sjomand, at Alexandria, from Batoum	C	1																
S. S. Sumatra, at Osaka, from Bombay	C				1	1												

Place		February, 1929	March, 1929	April, 1929	May, 1929	June, 1929	July, 1929
British East Africa (see also table above):							
Kenya	C	4	10	4	22	69	
Uganda	C		121				
	D		113				
Ecuador: Guayaquil	C	54	26	19	2		
	D	22	4	5	1		
Plague-infected rats		27	14	13	3	1	
Greece	C	1		1			
Indo-China (see also table above)	C		3	13			11
Madagascar (see also table above)	C	348	196	92			
	D	335	194	88			
Ambositra Province	C	164	90	8			
	D	164	90	8			
Antisirabe Province	C	21	13				
	D	21	13				
Itasy Province	C	10	8	2			
	D	10	7	2			
Moramanga Province	C	7	5	3			
	D	4	5	3			

Place		February, 1929	March, 1929	April, 1929	May, 1929	June, 1929	July, 1929
Madagascar—Continued.							
Tamatave	C			1			
	D			1			
Tananarive Province	C	146	120	78			
	D	136	119	74			
Peru	C	16	35				
	D	13	13				
Senegal:							
Baol [1]	C		6	1	21	32	
	D		3	1	6	17	
Dakar [1]	C			6	17	33	
	D			4	11	23	
Thies [1]	C	8	4	20	6	10	
	D	7	3	20	3	6	
Tivaouane [1]	C	12			22	93	
	D	2			10	50	

[1] Incomplete reports.

SMALLPOX

[C indicates cases; D, deaths; P, present]

Place		Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Mar. 10–Apr. 6, 1929	Apr. 7–May 4, 1929	Week ended— May, 1929			June, 1929					July, 1929				Aug. 3, 1929
						11	18	25	1	8	15	22	29	6	13	20	27	
Algeria:																		
Algiers	C			3	5	4			1	1	2	2	1	1				
Cherchell	C		21	42	1							1						
Oran	C		1	1	2		5			1								
Angola (see table below).																		
Arabia: Aden	C	2		30	69	3	10	20	7	20	25	10	55	18	21	42		
	D			8	20	3	1	9	7	2	6	6	6	18	4	17		
Bermuda: Hamilton	C									1								

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

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Mar. 10–Apr. 6, 1929	Apr. 7–May 4, 1929	Week ended— May, 1929			June, 1929					July, 1929				Aug. 3, 1929
						11	18	25	1	8	15	22	29	6	13	20	27	
Brazil:																		
Porto Alegre	C								1									
Rio de Janeiro	C						1		2									
British East Africa (see also table below):																		
Tanganyika	C	13	3		3	3	1											
British South Africa: Southern Rhodesia	C	1	17	69	13		12											
Canada:																		
Alberta	C	3	5	7	8					8	3	1						
Calgary	C		1		2													
Edmonton	C	2	2	12	5						3	1						
British Columbia—Vancouver	C	66	70	64	46	8	6	7	2	1	2	4	6	4	8	2		
Manitoba	C	21	15	3	2		2		4	6						1		
Winnipeg and vicinity	C										2							
New Brunswick	C			3														
Nova Scotia	C	2			1													
Ontario	C	83	83	57	113		30	7	3	15	39	21	9	25	5	13	14	
Niagara Falls	C			1					3									
North Bay	C		4		3	1		7			2			2	2	2	1	
Ottawa	C		1									1					1	
Toronto	C	1		2	1						1	4	2	5		1	1	
Windsor	C				3	3				1		1	3	1				
Prince Edward Island	C	2	2															
Quebec	C	24	28	14	34	3	3	3	3	5	3	2	1	2				
Montreal	C	10	16	4	4			1				1						
Quebec	C	8		3	1		1			2								
Riviere du Loup	C				1													
Saskatchewan	C	35	70	13	13		7		7									
Moose Jaw	C			1														
Regina	C	6																
Saskatoon	C	4		1														
China:																		
Amoy	C	P	5	3	4	1	1											
Canton	C	87	86	185	86	25		13	8	5	2	6	3	5	3	3	1	
	D	3	15	15	12	2		1	1	1				1	1			
Chefoo	C				P		P											

Foochow	C	P	P	P	P													
Hong Kong	C	307	189	92	53	8	10	5	6	2	2	4	2		1			
	D	286	246	137	97	6	8	4	7	2	2	1	1	3	2			
Manchuria—																		
Changshun	C	3	2		1													
Fushun	C	5																
Harbin	C	5		1	4													
Kwantung—																		
Dairen	C	2	9	1	11	8	4	4	5	2		4			1	4		
	D	2	3		4		1	3	4	2		1			2	3		
Port Arthur	C							3										
Mukden	C	3		1														
	D	1																
Shanghai—																		
Foreigners only	C	23	11	4	1	2	2		2		2		5	1	1	P		
Including natives	D	60	41	25	16	8	6	2		1		2	2					
Swatow	D		9	33	93	23	14	13	12	9	9		6	2	6			
Tientsin	C	3	2	8	6	8	4											
Tsingtao	C		P	P	P	P	P	P	P		P	P	P					
Yunnanfu	C			P	P													
Chosen (see table below).																		
Colombia:																		
Barranquilla	D															2		
Cartagena	D		7															
Curacao (alastrim)	C				1													
Dominican Republic	C	1																
Dutch East Indies:																		
Balikpapan	C		1	5	3		1	2	1		1							
Belawan Deli	C	26	9	7	4								1		1			
	D	6	6	2														
Borneo	C	30	26															
Samarinda	C	4	47	2	1								3	9	2			
	D			3									1					
Celebes—Makassar	C			6	39	16	11	9	7	5	4	5	6	6	4	5		
	D			2	25	9	10	8	6	4	2	4	5	3	3	3		
Java—Batavia and West Java	C								1						6			
	D									1								
Sumatra—																		
Baros	C	106	36	16														
	D	26	5	2														
Medan	C	11	9	7	2	1												
	D	5	6	3		1												
Palembang	C		9															
	D		2															
Ecuador (see table below).																		
Egypt:																		
Gharbieh	C		1															
Port Said	C	1			1							1						
Suez	C				5													
France (see table below).																		

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

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Mar. 10–Apr. 6, 1929	Apr. 7–May 4, 1929	Week ended— May, 1929			June, 1929					July, 1929				Aug. 3, 1929
						11	18	25	1	8	15	22	29	6	13	20	27	
Great Britain:																		
England and Wales	C	890	1,083	1,156	1,423	277	362	298	242	272	191	166	160	153	115	144		
Birmingham	C				1			1										
Bradford	C	1	2	3	1		2	2		2	2					2		
Bristol	C	1													1			
Cardiff	C	4		1	1				4									
Castleford	C	48	85	56	31		5	5	2	2			1		1			
Hull	C	2																
Leeds	C	3	6	8	3						1							
Liverpool	C	1		1														
London	C	40	54	58	201	50	52	53	38	69	41	40	17	43	16	30		
London and Great Towns	C	433	425	598	888	159	198	171	128	166	120	113	97	103	64	109		
	D			3	6	1	1	1				1		1	2			
Newcastle-on-Tyne	C	6	6	16	3	1	10	14	12		11		9	9	4			
Nottingham	C	1		2														
Stoke-on-Trent	C	14	18	72	133	12	41	18	15	24	9	13	16	5	7	11		
Scotland—																		
Aberdeen	C				2													
Glasgow	C			1	19	1												
Greece (see table below).																		
Hedjaz	C	153	108	84	77	23		7	10	23	19	22	19	27	8	7		
	D	56	40	52	52	13		4	7	11	12	16	14	21	2	4		
Honduras: Puerto Castilla	C						1											
India	C	12,531	14,890	19,120	22,556	5,105	4,653	3,809	3,444	3,765	2,942							
	D	3,045	3,285	3,983	5,060	1,354	1,173	838	820	891	693							
Bombay	C	158	397	441	315	54	70	34	50	38	42	36	31	28	21	22		
	D	78	188	206	175	30	46	22	33	22	27	27	23	13	15	12		
Calcutta	C	32	104	127	101	5	16	5	13	7	4	8	8	6	3	2		
	D	16	29	77	74	5	16	5	10	7	4	7	6	4	3	1		
Karachi	C	5	147	206	144	23	22	17	22	8	13	10	4	6	3	12		
	D	223	14	70	59	15	11	12	21	6	8	7	4	6	1	6		
Madras	C	35	260	392	327	60	53	37	24	21	17	28	22	25	39	24		
	D	6	61	83	84	14	23	11	13	2	6	8	4	6	12	10		
Moulmein	C	2	14	18	7		3	2	3	3			3	1	4			
	D		4	4	6		2	2	2	2			3	1	3			

Negapatam	C	26	5	9	7		1		1		2	1	3	1	1	2		
	D	6	4	1														
Rangoon	C	8	17	13	7	1								1	2			
	D	1	6	6	3		1							1				
Tuticorin	C	2	1		1						1							
Vizagapatam	C	8	52	20	28		1	1			2	2	2					
	D		9	5	8						1	1						
India (French):																		
Karikal	C			2	2	2		1			1	3	1					
	D			2	2	2		1			1	3	1					
Pondicherry Province	C	59	79	70	60	15	8	6	8	4		7	7	5		1		
	D	51	61	60	51	13	6	4	7	3		7	5	5		1		
India (Portuguese)	C								3	8	1				1	1		
Indo-China (see also table below):																		
Pnompenh	C	77	62	68	40	6	8	7	1	1	3	2	2	5	1	3		
	D	42	36	33	24	4	4	4		1	1			1	1	1		
Saigon and Cholon	C	5	2	2	2		1											
	D	1					1						1					
Iraq:																		
Baghdad	C	17	7	6	6			1	2		1					1		
	D	3	5	1														
Basra	C	18	7	9	8	2	1	3	2	8		1				1		
	D	10	5	2	6	1		4	3	1								
Diyalah Liwa	C					48								8				
	D					13								2				
Hillah Liwa	C	20																
	D	9																
Kirkuk Liwa	C		18															
	D		4															
Mossoul	C	30	28								12	6	2	12				
	D	17	4															
Sinjar	C	61																
	D	15																
Italy:																		
Rome and vicinity	C	2																
Turin	C		1															
Ivory Coast (see table below).																		
Jamaica (outside Kingston) (alastrim)	C				1	1									7			
Japan:																		
Kobe	C		1															
Nagasaki	C	3																
	D	2																
Niigata	C						12				2							
Osaka	C		1				1											
Shimane Province	C			16	3													
Tokyo	C					1		1			1							
Macao	D	24	75	32	20	2	2		1			2						
Mexico:																		
Acapulco	C				1		1											
	D				1		1											
Aguascalientes	D	3	3	5	9		2	1	3	5	4	3	5	3	5	2	1	
Chiapas Province	C			P														

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

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Mar. 10–Apr. 6, 1929	Apr. 7–May 4, 1929	Week ended— May, 1919			June, 1929					July, 1929				Aug. 3, 1929
						11	18	25	1	8	15	22	29	6	13	20	27	
Mexico—Continued.																		
Chihuahua	D	1																—
Coahuila	D											1						
Jalisco (State): Guadalajara	D	8	8	13	12	3	3	3	6	3	3	1	4	5		1		
Juarez	D	1	1	3														
Mexico City and surrounding territory	C	2	2	1					1	3	1	2	3	3	2			
Oaxaca—Zacatepec	C				P						1	1	6	1				
Palomas	C		1															
Tampico	C		1	2														
Vera Cruz	D			2														
Morocco (see table below).																		
Netherlands: Rotterdam	C																40	9
Nicaragua: Managua	C				P													
Nigeria:																		
Lagos	C			1	1	2												
Southern Provinces	C	162																
	D	31																
Norway: Stavanger	C				2													
Palestine	C								1									
Panama Canal Zone	C			P										7		13		
Persia (see table below).																		
Poland	C	41			6		1		1		35	31						
	D	3										2						
Portugal:																		
Lisbon	C	4		3	4				1	1	2	2	1	3				
Oporto	C			1	2							1	1		2			
Senegal (see table below).																		
Siam	C	2	4		55	10	7	10	5	21								
	D				8	5	2	2		5								
Somaliland, British: Boales	C										5		6		1	3		
	D												4					
Somaliland, French: Jibuti	C							1	2	2	5	3	6	8	7	19		
	D								1	2	2		4	2	1	5		
Spain: Valencia	C		2	5									1					
Straits Settlements: Singapore	C	5	3	1							1							

Sudan (Anglo-Egyptian)	C	265	188	245	377	102	264	309	835	228	243	113	588	323	25	724	49	55
	D	34	54	29	26	5	48	28	51	40	60	47	48	28	9	115	12	51
Sudan (French) (see table below).																		
Syria (see table below).																		
Tunisia: Tunis	G		5		2						1		1	1				
Turkey (see table below).																		
Union of Socialist Soviet Republics: Vladivostok	C								2									
Union of South Africa:																		
Cape Province	C				P	P	P	P		P	P							
Transvaal	C			P	P	P	P			P								
Upper Volta	C	3	4	4	15	2				2		5	3					
On vessel:																		
S. S. Aorangi, at Sydney	C												1					
S. S. Assyria, at Suez, from Bombay	C						1											
S. S. City of Venice, at Suez, from Calcutta	C							1										
S. S. Fern, at Port Said, from Abadan	C								P									
S. S. British Birch, at Suez, from Abadan	C												1					
S. S. Kenah, at Suakim, from Jeddah	C											4						
S. S. Le Panto, at Suez, Egypt	C					4												
S. S. Lopez-Lopez, at Suez	C				1													
S. S. Malwa, at Suez	C				1													
S. S. Mancar, at Suez, from Calcutta	C				1													
Tantalus (motor ship), at Amsterdam	C			3														
S. S. Tuscania, at Glasgow, from Bombay	C				P													

Place		January, 1929	February, 1929	March, 1929	April, 1929			May, 1929			June, 1929			July 8–10, 1929
					1–10	11–20	21–30	1–10	11–20	21–31	1–10	11–20	21–30	
Indo-China (see also table above)	C	311	364	561	500	100	155	343	67					87
Ivory Coast	C			4										
Senegal	C		80	70	50	7			1					
	D		8	11	15									
Sudan (French)	C			26	10	9	64	2					57	
	D			3									15	
Syria: Beirut	C	1	48	12	2	16		4		8	18	12	6	26

Place		January, 1929	February, 1929	March, 1929	April, 1929	May, 1929	June, 1929
Angola	C	1					
British East Africa (see also table above):							
Kenya	C			23	91	38	
Chosen: Chinampo	C		1				
Ecuador: Guayaquil	C	12	4	2	2	1	
	D	1	1				
France	C	9	3	5			15

Place		January, 1929	February, 1929	March, 1929	April, 1929	May, 1929	June, 1929
Greece	C	8	5	2	4	5	
	D	1	1				
Morocco	C	7	11	8	12	20	
Persia	C	68	23	8			
Turkey	C	16	7		1		11
	D	6					

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

TYPHUS FEVER

[C indicates cases; D, deaths; P, present]

Place		Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Mar. 10–Apr. 6, 1929	Apr. 7–May 4, 1929	Week ended— May 1929			June, 1929					July, 1929			
						11	18	25	1	8	15	22	29	6	13	20	27
Algeria:																	
Algiers	C			6	11	1				1							
Constantine Department	C	2	13	3					2	1	3	7					
Oran	C	5	2		8		12		2	1		4		3			
British South Africa: Northern Rhodesia	C								3								
	D								3								
Bulgaria	C	7	39	40	28	10	7		4	1	2	1		1	2		
	D		2	5	2	1						1			1		
Sofia	C	1															
Chile:																	
Concepcion	C			2			1										
Valparaiso	C													1			
China:																	
Canton	C	2															
	D	2															
Hong Kong	C	1															
Manchuria	C			1													
Chosen (see table below).																	
Czechoslovakia (see table below).																	
Egypt:																	
Alexandria	C			1	1												
	D			1		1											
Assouan Province	C		2														
	D		2														
Beheira Province	C		13	67	50	23	84	52		13				5			
	D			9	9		18	6		6				2			
Cairo	C								2					1		1	
Daqahliya Province	C			34													
Gharbieh	C	1	2														
	D		1														
Menoufieh Province	C				35												
Port Said	C						1	1		1			1	3	1		
Greece (see table below).																	
Hungary	C								1								
Indo-China (see table below).																	

Place		January, 1929	February, 1929	March, 1929	April, 1929	May, 1929	June, 1929
Ireland (Irish Free State):							
Cavan County—Carrickmacross	C					1	
Cork County	C		1				
Donegal County—							
Inishower	C				1		
Stranorlar	C						
Dublin	C	1					
	D	1					
Kerry County—							
Dingle	C			2	2		
Killarney	C		1		2		
Tyrone County, Strabane.[1]							
Latvia (see table below).							
Lithuania (see table below).							
Mexico (see also table below):							
Aguascalientes	D			5			
Mexico City, including municipalities in Federal District	C	11	7	4	4		
	D	3	2		1		
Morocco	C	29	17	19	28		1
	D				4		
Norway: Oslo	C					2	
Palestine	C	3		2	1		2
Poland	C	222	202	295	314	85	80
	D	15	18	20	25	7	8
Portugal:							
Lisbon	C						
Oporto	C						
Rumania	C	173	211	220	135	55	62
	D	23	28	30	16	10	9
Tunisia	C	2	3	20	19	1	1
Turkey (see table below).							
Union of South Africa:							
Cape Province	C	P	P	P	P	P	P
Natal	C		2	P	P		
Orange Free State	C	P	P		P	P	P
Transvaal	C	1		P	P		P
Yugoslavia (see table below).							

Place		January, 1929	February, 1929	March, 1929	April, 1929	May, 1929	June, 1929
Canada: Ontario	C						1
Chosen: Seoul	C	4		3	2	1	
Czechoslovakia	C	6	7	41	25	18	
	D		1	1		1	
Greece: Athens	C	13	4	4	2		
	D	5					
Indo-China: Tonkin	C				2		
Latvia	C			1	10	7	
Lithuania	C	32	24	62	101	63	27
	D	3	3	1	7	5	4
Mexico (see also table above):							
Sonora	D	1					
Turkey	C	1	3	11	3	7	10
	D		1			1	3
Yugoslavia	C	15	13	7		19	
	D		2			1	

[1] During the period from Apr. 14 to May 21, 1929, 18 cases of typhus fever with 4 deaths were reported in Strabane, Tyrone County, Ireland.

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

YELLOW FEVER

[C indicates cases; D, deaths; P, present]

Place		Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Mar. 10–Apr. 6, 1929	Apr. 7–May 4, 1929	Week ended— May, 1929			June, 1929					July, 1929			
						11	18	25	1	8	15	22	29	6	13	20	27
Belgian Congo: Tumba	C				1												
Brazil:																	
Bahia	C			1										1			
	D			1										1			
Guaratingueta	C		[1] 1														
	D		[1] 1														
Para	D	1		5													
Pernambuco	C			4													
Porto Alegre	D					[1] 1											
Rio de Janeiro [2]	C	16	92	252	180	24	22	17	7	5	2	0	0	0	1	0	
	D	17	67	132	94	18	11	6	3	3		2			1		
Sao Paulo	C	1															
	D	1															
Colombia:																	
Simacota	C																4
Socorro [3]	C													6			6
Liberia: Monrovia	C	3	7	10	2							1	3	4			
	D	2	4	4									3	1			
On vessel:																	
S. S. Skogland, at Porto Alegre, from Rio de Janeiro	C					1											

[1] Imported.
[2] 29 cases of yellow fever with 14 deaths were reported at Rio de Janeiro during January, 1929, mostly suburban.
[3] From June 19 to July 8, 1929, 41 cases of yellow fever with 23 deaths were reported in Socorro, Colombia.