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RECENT EXTENSION OF VENEREAL DISEASE CONTROL WORK THROUGH THE PROVISIONS OF THE SOCIAL SECURITY ACT[1]

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A few months ago we requested the health officers of the several States to inform us concerning the venereal disease control measures which were being developed in their health departments on October 1, 1936, under the provisions of the Social Security Act. Similar information had been collected in 1935 before social security appropriations were made available,[2] and this furnished a basis for comparison. The data upon which the present report is based consist, therefore, of statements submitted by the several State health officers. Generally speaking, it is felt that a clear description is given of the newly applied measures in the several States.

Eleven States (Alabama, Arizona, California, Florida, Indiana, Michigan, Nebraska, Nevada, New Hampshire, New Mexico, and Wyoming) reported that no funds had been allotted for the control of the venereal diseases. Several States had planned comprehensive programs but had not adopted them on October 1. If adopted, the projected work will lead undoubtedly to splendid accomplishments. Only work that appeared to be actually under way as of the above date, however, has been included in the present report. Detailed measures established by individual States will first be described. This will be followed by a presentation of the progress made by all States in instituting a generally accepted means of combating the venereal diseases.

DETAILED MEASURES ESTABLISHED BY STATES

Connecticut.—The cities of New Haven and New Britain have been allotted $1,800 each, the greater part of which is for salaries of part-time physicians in the venereal disease clinics. The State department of health has budgeted $3,000 for the purchase of antisyphilitic drugs.

Delaware.—In two towns night clinics have been opened in addition to the regular weekly clinics. In Wilmington a social service

[1] Read at the Conference on Venereal Disease Control Work, Washington, D. C., Dec. 28, 1936.

[2] Venereal disease control programs of the State departments of health. Ven. Dis. Inform., 17: 177 (1936).

nurse has been assigned to work with the four hospitals which maintain clinics. Arsenicals and other materials are furnished free to these clinics and some equipment has been given to one. The clinic directors are paid a small fee for attendance. A nurse has been added to each county unit to do follow-up work in tuberculosis and venereal diseases and to assist in the clinics. More thorough investigations are made as to the sources of infection, and isolation has been resorted to in several instances.

Mailing kits for delayed dark-field examinations have been made available to physicians. New pamphlets on syphilis and gonorrhea have been prepared for physicians to give to patients, and for distribution in the clinics.

District of Columbia.—New activities have been limited largely to improvement in the clinical service. Three part-time physicians have been added to the clinic staff and new equipment has been installed. Clinic hours have been increased from 22 hours per week to 34 hours per week. One full-time nurse has been added to the clinic, making four in all. In addition, nurses are assigned to clinic sessions for 9 half-days a week, and these also follow up selected cases.

Additional facilities have been provided for the treatment of infants with congenital syphilis, especially the children of women who have been under treatment during the prenatal period.

An associate bacteriologist has been employed in the health department laboratory, and an allowance of $600 per year has been made for the purchase of equipment and supplies. Since securing this allotment it has been possible to extend the work of examining food handlers and employees in business establishments.

Georgia.—An assistant chief of the division of venereal disease control has been employed. He is engaged in educational work and is addressing both professional and lay groups. Clinics for the examination of pregnant women are being held.

Idaho.—The first step in the program for Idaho was a State-wide venereal disease survey made by an officer of the Public Health Service. The recommendations in this report will be followed by the State health officer. Drugs are being distributed to private physicians for the treatment of both syphilis and gonorrhea, and one clinic has been established.

An educational program consisting of talks by staff members, articles in the monthly bulletin, and the distribution of literature relating to syphilis and gonorrhea, is being conducted.

Illinois.—A full-time venereal disease control officer has been appointed.

Iowa.—Efforts are being made to stimulate case reporting. When an early case is reported, physicians are furnished with neoarsphenamine and a bismuth preparation sufficient for 10 treatments. A copy

of the reprint "Standard Treatment Procedure in Early Syphilis" is also forwarded to physicians who report cases.

An assistant epidemiologist who will give part time to venereal disease control work has been appointed.

Kansas.—A full-time venereal disease control officer who had been given a special course of training was appointed on July 1. Under the guidance of an officer of the Public Health Service, a study of the venereal disease problem has been made, which included a survey of the clinics in the three large cities of the State—Kansas City, Wichita, and Topeka.

Maine.—Five new clinics are being equipped and are practically ready for work. Clinics will be located in 11 of the 20 cities in Maine.

Maryland.—Nine new clinics have been established. A division of venereal diseases in the bureau of communicable diseases of the State department of health has been created.

All State-operated or subsidized clinics have been inspected and approved. Uniform records and standards for the admission of patients, and uniform methods of treatment have been adopted.

Provision has been made at Johns Hopkins Hospital for the training in syphilis control work of physicians from any part of the country. Drugs for the treatment of syphilis are distributed free to all physicians desiring them regardless of the financial status of the patients.

Massachusetts.—In Massachusetts the work has centered on furthering the epidemiologic control of syphilis and gonorrhea. The follow-up service in 11 clinics has been augmented by the addition of 9 workers. The Boston metropolitan area has been divided into five districts. A worker has been assigned to each of these districts. This worker follows all the cases residing in the assigned district for all six clinics in Boston. Thus each clinic has five workers who are constantly in the field following lapsed cases and searching for contacts and sources of infection. The superintendents of the hospitals and the clinic personnel have entered whole-heartedly into this cooperative scheme and are giving it their full support.

A technician has been added to the staff of the laboratory. Orders have been placed for bismuth for distribution to clinics throughout the State.

Mississippi.—One new clinic has been organized in Vicksburg and a full-time social service worker employed. One clinic-day has been added to the clinic service in Pike County, and in Lauderdale County a full-time nurse for follow-up work has been employed.

Missouri.—The only control measure under way in Missouri is the distribution of free drugs for the treatment of syphilis to physicians upon request.

Montana.—In Montana, also, the only new work is the furnishing of free drugs for patients whose treatment would otherwise be delayed.

New Jersey.—The sum of $5,500 has been spent for drugs and supplies for distribution to clinics and physicians treating indigent cases. This is in addition to the amount purchased from State funds. Educational pamphlets to the number of 40,000 have been purchased; 10,000 reprints of the article Why Don't We Stamp Out Syphilis? are included.

A physician has been appointed as assistant to the consultant, whose chief work has been a survey of all the 36 clinics in the State. He is also assisting in the general program to improve the dark-field and Wassermann service.

Newark has been given $10,000 with which to increase venereal disease control work. A physician has been engaged on a full-time basis to assist in carrying out the program. Clinic physicians are being paid on a part-time basis, and drugs have been purchased for the use of private physicians in the city for the treatment of certain types of patients.

New York.—There have been no essential changes in the activities in New York State, where the program was well developed before Social Security funds were available. A program for the control of syphilis approved by the State department of health has been established in Albany, making the fourth city in the State in which such programs were in operation on October 1, 1936.

North Carolina.—A venereal disease control officer was appointed who was to assume his duties on October 1, 1936.

Ohio.—A part-time assistant venereal disease control officer has been employed. Better reporting is being stressed. Working with the health commissioner, every physician, dentist, and druggist in his district is interviewed personally. A reprint of the article Why Don't We Stamp Out Syphilis? is given each physician. Usually talks are made before the local medical society, and it is again explained that free arsenicals and free diagnostic service is available in all cases. The importance of the early treatment of syphilis is stressed and the practice of taking routine Wassermann tests of all expectant mothers is urged.

Lectures are also given before various civic organizations, clubs, and nurses' meetings. An exhibition of placards and charts has been shown at county fairs and before the Ohio State Medical Association. The film For All Our Sakes has been shown to civic organizations as well as to medical societies.

Pennsylvania.—An assistant full-time medical officer has been added to the staff of the division of genito-urinary clinics. An officer of the Public Health Service is assisting in the reorganization of the old program. Eleven nurses were given special training as medical investigators and have been stationed in different areas of the State to investigate sources of infection and to follow up contacts among clinic and private patients.

Nine new treatment centers have been established, bringing the total number of clinics in the State up to 76. Clinics have been furnished with additional equipment and drugs. A more liberal policy has been adopted in the matter of furnishing free drugs to physicians for treatment of syphilis.

Rhode Island.—Special attention is being given to epidemiologic investigations. The efficiency of these investigations has greatly increased since the establishment of district health units was made possible by Social Security funds.

Hospitals have been asked to make routine Wassermann tests on all patients admitted either to the out-patient department or to the hospital. Thus far the response has been poor, but efforts to obtain the cooperation of the hospitals will be continued.

South Carolina.—Efforts are confined to the control of syphilis. The cooperation of the medical societies in the State has been sought. The sum of $3,000 has been allotted for the purchase of drugs for the treatment of syphilis.

Tennessee.—A full-time venereal disease control officer has been employed in the State.

Texas.—A full-time venereal disease control officer has been employed. New forms for reporting cases of venereal disease and new pamphlets for general distribution have been prepared and are ready for printing.

Vermont.—Drugs were formerly furnished for indigent patients, but now are furnished to all patients through the private physician.

Washington.—A full-time venereal disease control officer has been appointed and a comprehensive program planned. The epidemiologic program, which has for its aim an interview with every patient regarding the source of infection and contacts, was under way on October 1, 1936.

Public health nurses are available for the follow-up of private patients.

West Virginia.—Two clinics have been reorganized. Several motion-picture films have been purchased.

Alaska.—A laboratory has been established, the services of which are free.

PROGRESS IN STATES BY TYPE OF MEASURES ADOPTED[3]

DIVISION OF VENEREAL DISEASE CONTROL

Separate divisions of venereal disease control have been established in three States, Kansas, Maryland, and Texas, making 16 States in all that now administer their programs for venereal disease control

[3] Slides of outline maps have been made showing the States which have adopted the different control measures mentioned here. These slides may be secured on request to the Surgeon General of the Public Health Service.

through separate divisions. The other 13 States are Connecticut, Georgia, Indiana, Kentucky, Maine, Nebraska, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, West Virginia, and Wisconsin.

FULL-TIME CONTROL OFFICER

Seven States, Illinois, New Jersey, North Carolina, South Dakota, Texas, Tennessee, and Washington, have added a full-time venereal disease control officer to the staff of the department of health. Nine States, Connecticut, Georgia, Indiana, Massachusetts, New York, Ohio, Pennsylvania, Rhode Island, and West Virginia, already had full-time officers.

FREE DRUGS FOR TREATMENT FURNISHED ALL PATIENTS

There appear to be only three States, Maryland, New York, and Vermont, in which drugs for the treatment of syphilis are furnished free for the treatment of all classes of patients, Vermont being the only State to add this service since Social Security funds became available.

FREE DRUGS FURNISHED INDIGENT PATIENTS

Free drugs for the treatment of indigent patients have been provided for several years in 30 States and the District of Columbia, at least to a limited degree. They are now distributed in seven additional States, viz, Idaho, Louisiana, Mississippi, Missouri, Montana, South Carolina, and Washington. In Missouri and Montana no other new work is reported as having been started by October 1, 1936. On that date, Arkansas, Colorado, Kansas, Nevada, North Carolina, North Dakota, Texas, Utah, and Wyoming were not providing antisyphilitic drugs through their State health departments.

DARK-FIELD EXAMINATION FOR PRIVATE PATIENTS

Vermont is the only State in which dark-field examination for private patients has been provided for from Social Security funds, making 21 States in which this service is now available. These States are Delaware, District of Columbia, Georgia, Illinois, Louisiana, Maine, Maryland, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Rhode Island, Utah, Vermont, West Virginia, and Wisconsin. Is your State among these?

Most State health officers report that their departments include laboratories where serologic tests for the diagnosis of syphilis are performed free upon the request of any physician. Wyoming had no such laboratory. In Colorado, Iowa, Kansas, Oregon, and Texas some limitation is placed upon serologic tests; a charge for the service is made or the tests are for indigent people only. The universal need for free serodiagnostic tests, efficiently performed and

available to all, can best be appreciated when it is recalled that such tests constitute one of the two most important laboratory methods of control.

EPIDEMIOLOGIC MEASURES

Epidemiologic investigations seem to have fared rather better than some other projects. Eight States, Delaware, Maryland, Massachusetts, Mississippi, New Jersey, Pennsylvania, Rhode Island, and Washington, and the District of Columbia report increased facilities for follow-up work. Epidemiologic measures were reported in all States except Arizona, Arkansas, Colorado, Florida, Missouri, Montana, Nevada, New Mexico, Ohio, Oklahoma, South Carolina, Texas, and Wyoming.

REPORTING CASES OF SYPHILIS AND GONORRHEA

During the year July 1, 1935, to June 30, 1936, there were 26 States and the District of Columbia in which the number of reported cases of syphilis and gonorrhea was more than 2 per 1,000 of the population in the State. It is hardly necessary to remind a group of health officers that this gives an indication of the relative completeness of morbidity reporting rather than the actual prevalence of these diseases. The States reporting more than 2 cases of syphilis and gonorrhea per 1,000 population are as follows: Alabama, Arizona, Arkansas, California, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New Mexico, New York, North Carolina, Oregon, Rhode Island, South Carolina, Tennessee, Virginia, Washington, and West Virginia.

MORE THAN ONE CLINIC PER 100,000 POPULATION

According to recently compiled data there are about 1,000 free, pay, and part-pay clinics for the treatment of syphilis and gonorrhea in the United States, or approximately one clinic to every 130,000 of the population. In 15 States, California, Connecticut, Delaware, Kentucky, Maine, Maryland, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Pennsylvania, Rhode Island, Tennessee, and West Virginia, and the District of Columbia the ratio of clinics to population is greater than this. It is to be noted that the efficiency of clinic operation has not been considered here although it is a factor of the greatest importance.

It is well established that both syphilis and gonorrhea are more prevalent among Negroes than among white persons. The section of the country which has the largest Negro population, and, therefore, needs facilities for the treatment of venereal diseases more than any other section, is providing fewer clinics to supply this treatment than the average for the whole country. The same deficiency exists in

the majority of the States, the only mitigating circumstances being that the need for free treatment is probably not so great in sections with smaller Negro and urban populations.

DIRECT EXPENDITURES FOR VENEREAL DISEASE CONTROL

Direct expenditures for the control of venereal disease (that is, exclusive of laboratory maintenance) are very small. In only six States (Delaware, Idaho, Massachusetts, New Jersey, New York, and Utah) is the amount as much as 1 cent per capita. In one or two States it is less than 1 mill. Delaware carried the honors with 3 cents per capita.

No real headway against such widely prevalent diseases as syphilis and gonorrhea can be expected so long as these small and, in some instances, trifling sums are alloted for the program.

THE WORK MUST GO FORWARD

Venereal disease control measures which have been instituted vary both in number and in comprehensiveness. A total of 25 States, the District of Columbia, and Alaska, report the development of new work under the provisions of the Social Security Act. This is encouraging, especially because of the tendency of many health officers until recently to regard as of questionable value the practicability of venereal disease control work. The experience of foreign countries in the control of syphilis and a growing public interest have stimulated action. In addition, the success attained in several States in this country with more progressive health departments has augured well for the future of the program. The worthwhile attainments of the States now adopting new measures for venereal disease control will without doubt serve as an increased incentive to the rapid expansion of this work. United and sustained effort by all health officers is necessary and will be achieved. The syphilis problem is a national one.

A recent event which apparently indicates the active interest of the medical profession was the action of the presidents and secretaries attending the Conference of Presidents and Secretaries of State Medical Societies in Chicago last month. Following the unanimous approval of those present at this meeting, the Surgeon General has requested the appointment of a committee, representing the State society, which will recommend a practical local program for the control of syphilis and gonorrhea. An advisory committee of this kind has already been appointed by presidents in 21 State medical societies. Five reports have already been submitted by the committees in as many States. The plan calls for the submission of the report not only to the Public Health Service but also the State health officer.

CONCLUSIONS

The evidence which has been accumulated in this report indicates an urgent need for the adoption of the following measures in the campaign against syphilis and gonorrhea in this country:

1. The appointment of a full-time venereal disease control officer in every State department of health.
2. A much more liberal policy with regard to the free distribution of antisyphilitic drugs.
3. More general use of the dark-field examination, either direct or delayed, in the diagnosis of early syphilis.
4. More widespread use of epidemiologic investigations in the control of syphilis.
5. Greater persistence on the part of health officers in the attempt to obtain reliable morbidity and mortality reports.
6. The development of more and better facilities for diagnosis and treatment.
7. The adoption of reasonable standards of efficiency by State health departments before formal recognition is given to clinics for the treatment of syphilis and gonorrhea.
8. A much more liberal allotment of funds for direct expenditures in the control of the venereal diseases.

SOURCES OF INFECTION AND SEASONAL INCIDENCE OF TULARAEMIA IN MAN[1]

By EDWARD FRANCIS, *Medical Director, United States Public Health Service*

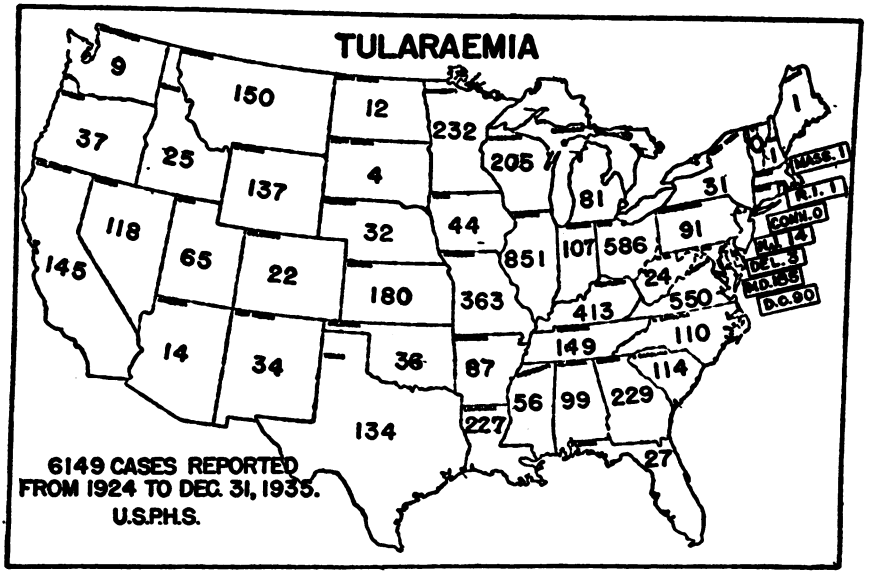
"Tularaemia is an acute infectious disease caused by *Bacterium tularense* and occurs under natural conditions in over 20 kinds of wildlife, especially in wild rabbits and hares. Man becomes infected by contact of his bare hands with the raw flesh and blood of these animals or by bites of blood-sucking ticks and flies which have previously fed on animals infected with *Bacterium tularense*.

History.—Tularaemia has been elucidated from beginning to end by American investigators alone. The disease was discovered in 1910 (then called a "plague-like disease of rodents") by Dr. George W. McCoy of the United States Public Health Service, in the ground squirrels of Tulare County, Calif.—hence the name tularaemia. This name was given to the disease by the writer in 1920 after establishing the identity of the California rodent disease and "deer-fly fever" in man in Utah following an investigation of an outbreak of the latter disease in that State.

Geographic distribution.—Human cases have been recognized in 46 States of the United States and in the District of Columbia. The only States in which cases have not been recognized are Vermont and

[1] From the National Institute of Health, Washington, D. C.

Connecticut. The disease was reported in Japan in 1925, in Russia in 1928, in Norway in 1929, in Canada in 1930, in Sweden in 1931, and in Austria in 1935.



MAP 1.—Distribution of cases of tularaemia by States over a 12-year period.

Cases reported in the United States

	Cases	Deaths
Previous to 1924	15	2
1924, 1925, and 1926	308	11
1927	251	10
1928	350	10
1929	462	36
1930	659	37
1931	675	32
1932	933	41
1933	892	33
1934	881	48
1935	748	39
Total	6,174	299
Case fatality, 4.8 percent.		

SOURCES OF HUMAN INFECTION

Bacterium tularense is known to have reached man directly from over 20 sources, comprising the following great variety of animal and insect hosts of the infection in nature:

Wild rabbits and hares.—Cottontail rabbit, *Sylvilagus floridanus;* jack rabbit, *Lepus*, sp.; snowshoe hare, *Lepus bairdi.* These animals are the direct cause of over 90 percent of human cases in the United States. It is estimated that about 1 percent of them are naturally infected.[1] The disease is a bacteraemia among them and is spread

[1] Public Health Reports, 38: 1391 (1923). Mil. Surgeon, 53: 164 (1923).

from rabbit to rabbit principally by the rabbit tick, *Haemaphysalis leporis-palustris*, but also by other blood-sucking arthropods—ticks, lice, and fleas. The rabbit tick, the rabbit louse, and the rabbit flea do not bite man, and therefore they are not a source of human infection. Rabbits raised under domestic conditions in rabbitries and hutches, although highly susceptible, have not been found naturally infected, due probably to their freedom from ticks.

Market men, hunters, housewives, and others who dress rabbits with bare hands become infected. In the majority of human cases a wound of entry has been inflicted at the site of cutaneous infection either at the time of infection or shortly before or after. These wounds consist of cuts, punctures, or scratches by fragments of shot-shattered rabbit bone or by knife, nail, barbed wire, thorn, brier or burr, or splinter of wood, etc. Since the organism will penetrate the normal skin, a wound of entry is not necessary for infection.

Wood ticks, Dermacentor andersoni, have caused 53 cases in Montana and surrounding States. The dog tick *Dermacentor variabilis* has caused 65 cases in the Southern States. Ticks bite under the clothing or hidden in the hair.

Horse flies, Chrysops discalis, have caused 68 cases in Utah and surrounding States. They bite on the exposed parts of the body. Thirty of 170 enrollees in a CCC camp in Utah became infected in July 1935. Their unusual sites of infection were located on the back because the boys, when at work, were stripped to the waist.

Sheep contact has caused 12 cases in the Northwest among shearers, butchers, and herders, the infection entering the hands from contact with wood ticks and their feces located in the wool. Sheep are only very slightly susceptible.

Insect bites (species undetermined) caused 9 cases. One infected person had picked ticks from a dog and crushed them with his fingers.

Tree squirrels had been dressed by 10 patients. Nine had killed and skinned *opossums*. One case each followed the dressing or skinning of a *sage hen, coyote, deer, red fox*, or *bull snake*. Two cases each followed like contact with *quail, ground hog, muskrat, hog*, or *skunk*. Two had been scratched by *cats*. Single cases have resulted from *bites* of cat, skunk, coyote, tree squirrel, Montana ground squirrel, opossum, dog, hog, lamb, and a white rat; here contamination of the animal's mouth parts is assumed.

Laboratory infection of man.—In 13 laboratories in the United States, England, Japan, and Russia, 41 workers contracted the disease performing necropsies of infected guinea pigs and rabbits or from handling infected living ticks. Infection penetrated the skin of the hands.

Ingestion of insufficiently cooked wild-rabbit meat caused 20 cases in 5 families in the United States, of whom 12 died. A *water-borne*

epidemic of 43 cases was reported in 1935 from Russia in peasants who drank water from a brook which was thought to have been contaminated by water rats.

Water rats, Arvicola amphibius, caused an explosive outbreak of about 1,000 cases in Russia in 1928 in persons who skinned them for their pelts, not knowing of that reservoir of infection.

Eye infections.—In a total of 68 cases the conjunctiva was the primary seat of infection. The infection was transferred to the eye by the hands while dressing rabbits in 52 cases; after crushing flies or ticks between the fingers in 11 cases; bloody washings of a rabbit or bile of a ground hog spurted into the eyes in 3 cases; and 1 case followed the dressing of rabbits and tree squirrels. Only three eye cases showed a simultaneous lesion on the hands.

California ground squirrel.—Although this is the animal in which McCoy discovered the disease in 1910, human cases have not yet been traced to it. But, should its fur acquire a remunerative commercial value, then we may expect human cases to arise from skinning this animal, just as the price of 15 kopecks per water-rat pelt unearthed a hitherto unknown reservoir of infection in Russia and caused the above-mentioned outbreak.

Potential sources of human infection.—Animals in the United States from which *B. tularense* has been isolated in nature but which have not yet caused human cases are as follows: California ground squirrels, gray foxes of Minnesota, wild rats of Los Angeles, field mice of California, ground squirrels of Utah and Montana, ruffed grouse and sharp-tailed grouse in Minnesota, prairie dog in Utah, the tick *Dermacentor occidentalis* in California, and the rabbit fleas of Minnesota.

SEASONAL INCIDENCE

Seasonal incidence of cases of tularaemia is due to the seasonal variation of three sources of infection—tick bite, fly bite, and the dressing of wild rabbits; but, owing to the overlapping of these influences, cases have occurred in the United States in every month of the year.

(1) *Dressing wild rabbits.*—November and December have been the months of onset for nearly all cases occurring east of the Mississippi River resulting from the dressing of wild cottontail rabbits for food. These months embrace the "open season" when, owing to temporary abeyance of the State game laws, the hunting of cottontail rabbits as a sport is generally permitted and, consequently, these rabbits are then offered for sale in great numbers in the markets. Ohio, Pennsylvania, and Illinois furnish striking illustrations of the absence of cases during the 10 months of "closed season" when rabbits are protected, as against the abundance of cases during the 2 months of "open season." (See table 1.)

TABLE 1.—*Months of onset and number of cases of tularaemia due to bites of horse flies, wood ticks, and dog ticks, and to the dressing of wild rabbits during the 12-year period ended Dec. 31, 1935*

	January	February	March	April	May	June	July	August	September	October	November	December
Chrysops discalis (horse flies)						Utah 4 Wyoming 2 Oregon 1 Montana 1	Utah 33 Wyoming 6 Idaho 1 Oregon 2 Colorado 2 Nevada 7 Minnesota 1	Utah 1 Wyoming 2 Idaho 1 Oregon 1 Nevada 1	Wyoming 1			
Total						8	52	6	1			
Dermacentor andersoni (wood tick)			Montana 2	Montana 3	Montana 16 Nevada 1 Wyoming 7 Idaho 3	Montana 6 Wyoming 2 S. Dakota 1	Montana 4 Nevada 1 N. Dakota 1 California 1	Montana 2 Nevada 3				
Total			2	3	27	9	7	5				
Dermacentor variabilis (dog tick)	Texas 1	Louisiana 1	Louisiana 2 Arkansas 1 Georgia 1	Louisiana 5 Arkansas 3 Texas 2 Tennessee 1 Missouri 2	Louisiana 3 Arkansas 2 Texas 2 Tennessee 2 Missouri 3 Illinois 1	Louisiana 1 Arkansas 1 Tennessee 1 Missouri 2 Maryland 1 Minnesota 1	Louisiana 2 Arkansas 1 Texas 3 Virginia 4	Tennessee 1	Louisiana 1	Louisiana 2		
Total	1	1	4	13	13	7	10	1	1	2		
Dressing wild rabbits: [1]												
Ohio [2]	1	1						2			69	13
Pennsylvania [3]	4									1	28	12
Illinois [4]	1									1	23	18

[1] Numbers for Ohio, Pennsylvania, and Illinois represent only that portion of total cases for which the exact month of onset is accurately recorded.
[2] "Open season" for rabbits Nov. 15 to Dec. 31. [3] "Open season" for rabbits Nov. 1 to Nov. 30. [4] "Open season" for rabbits Nov. 1 to Jan. 31.

Jack rabbits are found almost exclusively west of the Mississippi River; and since they are a pest to farmers, they are unprotected by the game laws and their destruction is often rewarded by a bounty. Cases west of the Mississippi River due to the activities of skinning and cutting up wild jack rabbits for fish bait, coyote bait, chicken feed, dog feed, fox feed, and for the table, are without seasonal incidence.

(2) *Fly bite.*—June, July, August, and September have been the months of onset of 67 cases due to the horse fly, *Chrysops discalis*, which occurs in Utah and the surrounding States and which has its greatest activity in the months named. (See table 1.) This fly feeds on horses, cattle, rabbits, and man, hence the transfer of infection from rabbit to man.

(3) *Tick bite, Dermacentor andersoni.*—March to August are the months recorded for the onset of 53 cases of tularaemia due to the wood tick *Dermacentor andersoni* which occurs principally in Montana and the surrounding States (see table 1). These months correspond with the season of greatest activity of this tick. This tick becomes infected in the larval or nymphal stages by feeding on an infected rabbit and it infects man when, later, as an adult, it feeds on him.

(4) *Tick bite, Dermacentor variabilis.*—January to October are the months recorded for the onset of 53 cases of tularaemia due to the dog tick *Dermacentor variabilis* which is distributed widely throughout the Eastern and Southern States and feeds on dogs, rabbits, and man (see table 1).

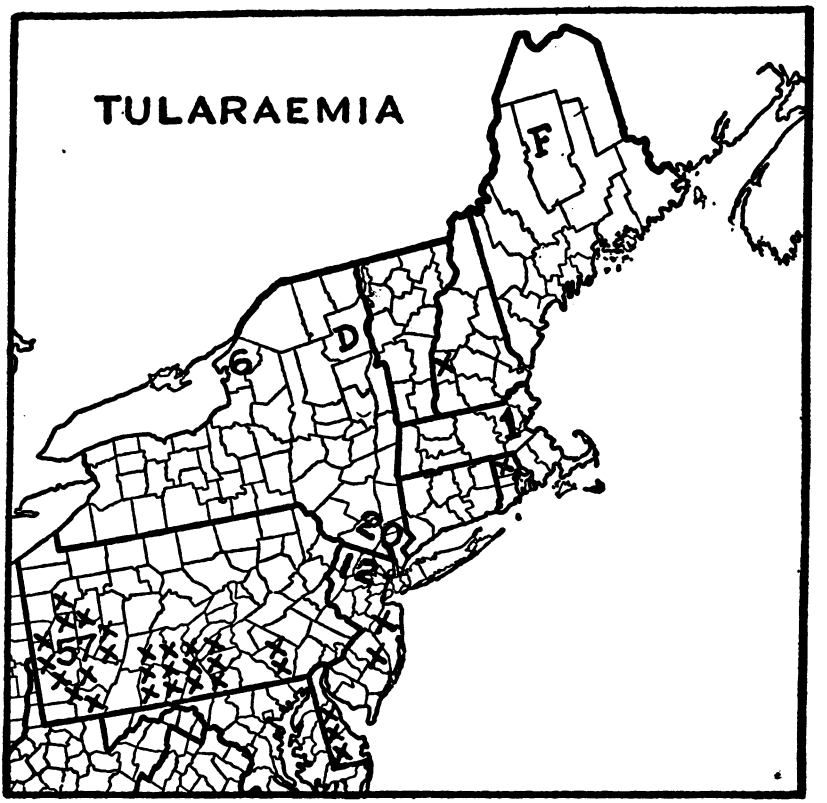
OCCURRENCE IN NORTHEASTERN UNITED STATES

One is struck by the small number of cases occurring in the States comprising the northeastern section of the United States (see map 1). Analysis of these cases as to source of infection reveals the very small proportion of them which are tracable to hunting and skinning the local native wild rabbits found within the borders of these States (see map 2). On the other hand, the large percentage of them have skinned "market rabbits" bought in the large municipal markets to which they have been shipped from western and southern localities and held in cold storage. Detailed analysis as to sources of infection of cases which have become infected within the borders of the Northeastern States during the 11-year period ended December 31, 1935, follows:

Maine.—Case "F", a trapper, contracted tularaemia in November 1933 at Kokadjo, on Moosehead Lake, from skinning a red fox, and died February 6, 1934. Dr. George H. Coombs, State Health Commissioner, sent to the National Institute of Health portions of approximately 100 red foxes, two of which yielded cultures of *Bacterium tularense* by guinea pig inoculation, thus demonstrating the infection

in nature in red foxes in Maine. Portions of approximately 100 wild rabbits, shot in Maine and forwarded by Dr. Coombs were found negative for tularaemia at the National Institute of Health.

New Hampshire.—One person became ill of tularaemia on November 23, 1931, at Claremont, N. H., after dressing 2 rabbits killed near Claremont.



MAP 2.—Sources of infection of cases of tularaemia in Northeastern United States during the 11-year period ended Dec. 31, 1935. *X* denotes a case due to dressing a native wild rabbit hunted and killed in the immediate locality. *Numbers* denote cases due to dressing shipped market rabbits in Pittsburgh, New York, Buffalo, Boston, or New Jersey. *F* denotes a case due to skinning a red fox. *D* denotes a case due to skinning a deer.

Vermont.—No cases of tularaemia reported.

Massachusetts.—One person contracted tularaemia on December 31, 1929, in Boston after dressing a cold-storage rabbit obtained in the Boston market.

Rhode Island.—One man contracted tularaemia on May 6, 1929, at North Scituate, R. I., after tearing apart 3 rabbits found dead on his farm.

Connecticut.—No cases of tularaemia reported.

New York.—Beginning with the first case reported in the State, which was in Buffalo in 1927, and ending December 31, 1935, a total of 31 cases has been reported in New York State, the data regarding the source of infection being as follows:

6 in Buffalo dressed market rabbits.
18 in New York City dressed market rabbits.
2 in New York City dressed huckster rabbits.
2 in New York City did not state the source of rabbits.
1 in New York City denied dressing a rabbit.
1 in Essex County skinned a deer and other animals.
1 in Albany, autopsied a laboratory guinea pig known to be infected.

Pennsylvania.—Beginning with the first case reported in the State in 1925 and ending December 31, 1935, a total of 91 cases of tularaemia has been reported by Pennsylvania, data regarding the source of which are as follows:

57 in Pittsburgh dressed market rabbits.
1 in Pittsburgh did not state source of rabbits.
2 in Philadelphia, dressed rabbits killed at Girdletree, Md.
1 in Philadelphia dressed rabbits killed at Winchester, Va.
1 in Delaware County dressed a rabbit received from Virginia.
1 in Allegheny County dressed a rabbit killed in Virginia.
1 in Franklin County dressed a rabbit killed in Virginia.
1 in Lancaster County dressed a rabbit received from Virginia.
1 in Montgomery County dressed a rabbit killed in Maryland.
8 dressed rabbits, hunted and killed in Allegheny County.
8 dressed rabbits hunted and killed in Franklin County.
8 dressed rabbits hunted and killed in Perry County.
1 dressed rabbit hunted and killed in Adams County.
1 dressed rabbit hunted and killed in Butler County.
2 dressed rabbits hunted and killed in Lancaster County.
2 dressed rabbits hunted and killed in Fayette County.

New Jersey.—Beginning with the first case reported in New Jersey in 1927 and ending December 31, 1935, a total of 14 cases of tularaemia has been reported, data concerning which are as follows:

12 dressed market rabbits in Jersey City, Newark, Atlantic City, Union City, West New York, Weehawken, or Maplewood.
2 dressed rabbits hunted and killed in New Jersey.

Delaware.—Beginning with the first case reported in Delaware in 1930 and ending December 31, 1935, a total of three cases of tularaemia has been reported by Delaware, all of which contracted the infection from rabbits shot within the State of Delaware, one near Stockley and the other two in New Castle County.

Discussion.—The term "market rabbits" refers to rabbits bought in the large municipal markets; these are cold-storage rabbits received from western and southern localities. It is assumed that they have not been killed within the State and that they do not represent infection of the local native rabbits.

The importation of living western rabbits by State game commissions for restocking the depleted rabbit population has been practiced extensively in New York and Pennsylvania and to some extent in Connecticut. Connecticut has not reported any cases of tularaemia. New York has not reported any case due to skinning or dressing a wild rabbit hunted and killed within the borders of the State. Pennsylvania has reported only 25 cases traced to rabbits killed within the State borders. Further analysis of the 25 cases shows that the border counties of Lancaster, Adams, Franklin, and Fayette, all bordering on the infected States of Maryland and West Virginia, furnished 13 of the 25 cases, thus leaving 12 cases, of which 8 are attributed to rabbits hunted and killed in the slightly inland county of Allegheny, 3 to the slightly inland county of Perry, and 1 to the slightly inland county of Butler. It seems that the importation of western rabbits for restocking has not caused tularaemia to any notable extent and that the southern and western borders of Pennsylvania present conditions similar to those of the adjacent States.

It would seem that the northeastern section of the United States is almost noninfectable territory, but the reason for that condition is not clear. Absence or very low level of infestation of wild rabbits in that area with the rabbit tick *Haemaphysalis leporis-palustris* might reduce the chances of spread of infection from rabbit to rabbit to very near the vanishing point. The actual condition as to the degree of tick infestation of rabbits in that area becomes a question for the entomologist.

APPEARANCE OF INFECTED RABBITS

The liver, spleen, bone marrow, and lungs of an infected rabbit are studded over the surface with small spots varying in size from that of a pin point to one-sixteenth inch in diameter (figs. 1–3). The liver of an infected rabbit is recognized by the spotted appearance of its surface; innumerable small round spots become plainly visible on the third or fourth day of illness, but these spots are too small to be seen on the first and second days of illness. Therefore, if a rabbit is shot on the first or second day of illness the liver, though diseased, will appear healthy. In addition, the germs grow and multiply in every part of the rabbit's body, including the blood and muscles.

SYMPTOMS IN MAN

Hunters, market men, cooks, and housewives become infected when skinning or dressing wild rabbits. Their bare hands become covered with blood when they pull out the livers and spleens. If by

chance there is an open sore or cut on the hands, the infection travels from the rabbit's blood or liver into the wound on the hand causing tularaemia, or rabbit fever. When a rabbit is shot, its bones become shattered into sharp fragments. If, in dressing an infected rabbit, one of these fragments of bone pierces the skin of the hands, the infection enters at that point. About 3 days after exposure to infection, illness begins with headache, chilliness, vomiting, aching pains all over the body, and fever. The patient thinks that he has the "flu" and goes to bed. The sore on the hand develops into an ulcer (fig. 5). The glands at the elbow or in the armpit become enlarged, tender, and painful, and later may develop into an abscess (fig. 6). There is sweating, loss of weight, and debility. Illness lasts about 3 weeks and is followed by a slow convalescence covering a period of 2 or 3 months. Most patients recover without any bad after effects, but about 5 percent die, especially if the case is complicated by pneumonia.

Diagnosis.—The history of tick-bite, fly-bite, or wild rabbit contact especially, or contact with other animals, when coupled with fever, an ulcer on the skin, and regional lymph-node enlargement, should call attention to tularaemia. Diagnosis is made conclusive by obtaining agglutination of *Bacterium tularense* by the patient's serum or by obtaining a culture of the organism from the patient's ulcer or lymph nodes following guinea pig inoculation, or by obtaining a positive skin reaction using an antigen prepared by Foshay of Cincinnati for intradermal injection.

Immunity.—One who has recovered from an attack of tularaemia need not fear a second attack, because he is then immune to the disease. There is no record of a second attack in man.

Noncontagiousness.—There is no record of the transfer of the infection from man to man. Doctors, nurses, and attendants on the sick have not contracted the disease.

Prevention.—Keep the bare hands out of a wild rabbit. Rubber gloves afford reasonable protection to those who must dress wild rabbits and other animals, but sharp fragments of rabbit bone can easily pierce a rubber glove and puncture the hand. Employ immune persons when contact with infected material is necessary. Thorough cooking of all wild game, especially rabbits, is essential. Infected meat is rendered harmless for food by thorough cooking; but if any red juice is allowed to remain about the bones, the germs will remain alive and virulent in it. The liberal use of soap and water and disinfection of the hands are recommended to remove rabbit blood from the hands, or even when the hands have come in contact with the rabbit's fur. The ordinary disinfectants are effective. Disinfection of bites, cuts, punctures, and scratches should be practiced, but this measure has often failed to prevent infection. Disinfection of ulcers,

FIGURE 1.—Liver of domesticated rabbit dead fourth day. (Army Medical Museum, no. 48265.)

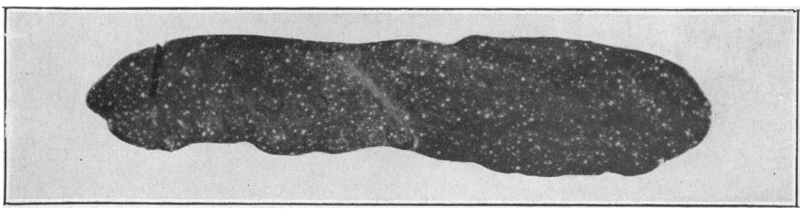


FIGURE 2.—Spleen of domesticated rabbit dead fourth day. (Army Medical Museum, no. 48266.)

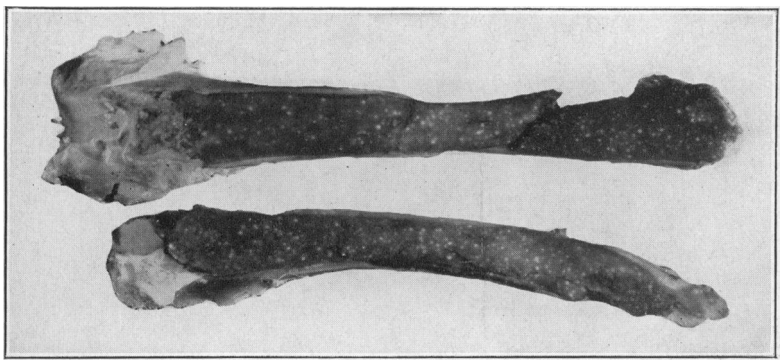


FIGURE 3.—Marrow of femurs of domesticated rabbit dead third day. (Army Medical Museum, no. 48267.)

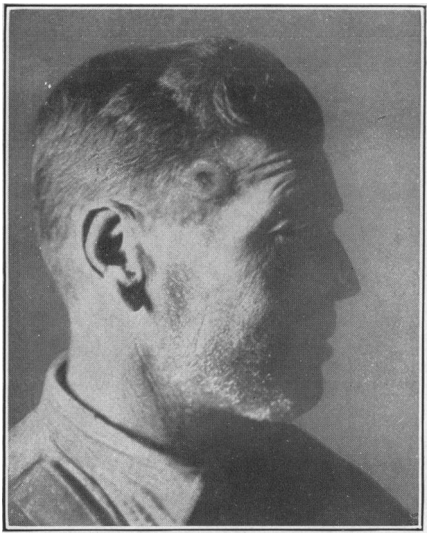


FIGURE 4.—Primary ulcer on the temple following bite of fly, *Chrysops discalis*, in Utah. (Francis, Army Medical Museum, no. 42955.)

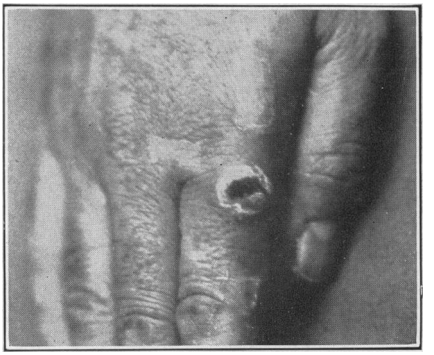


FIGURE 5.—Primary ulcer on finger following dressing of wild rabbits, 18 days after onset. (Dr. Tomas Cajigas, Army Medical Museum, no. 63174.)

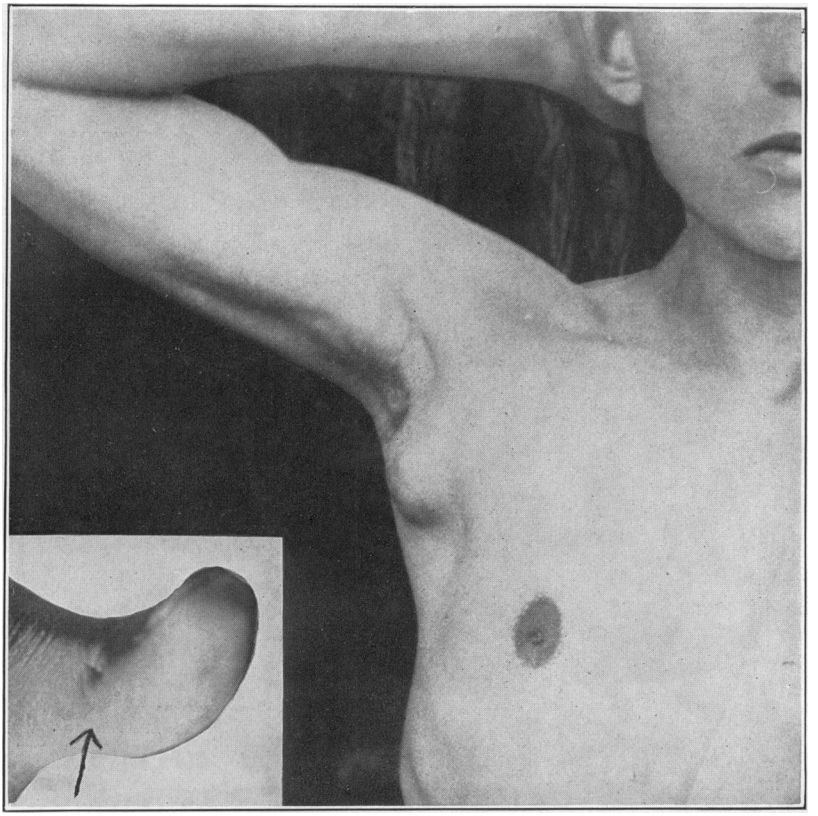


FIGURE 6.—Ulcer of thumb and axillary bubo after dressing market rabbits; 40 days after onset of illness. (Drs. Brown and Hunter, Army Medical Museum, no. 43709.)

abscesses, sputum, conjunctival secretion, urine, and feces of patients would seem indicated, but no case has been traced to these sources. Isolation, quarantine, and house disinfection are not indicated.

FIVE HUNDRED CASES OF SCARLET FEVER CAUSED BY USE OF RAW MILK FROM INFECTED COW

A recent epidemic of approximately 500 cases of scarlet fever in Oswego, Tioga County, N. Y., has been traced to the use of raw milk from an infected cow, according to a statement issued by the State department of health. The source of the outbreak was suspected early in the epidemic, and the sale of raw milk from the dairy concerned was stopped on December 23, 1936. This action was followed by a rapid decline in the number of cases.

The investigations revealed that the suspected animal had been taken into the herd at the dairy farm a few days before the beginning of the outbreak. Immediately prior to that time the cow had been on a farm on which it was learned there had occurred three cases of scarlet fever, one of which was in a boy who had milked the cow. The evidence indicated that the animal had acquired the infection there and was infected when sold to the dairy farm.

As a result of this outbreak of scarlet fever, and the determination of its cause, the town of Oswego has passed an ordinance requiring the pasteurization of all milk sold there.

DEATHS DURING WEEK ENDED JANUARY 2, 1937

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

	Week ended Jan. 2, 1937	Corresponding week, 1936
Data from 86 large cities of the United States:		
Total deaths	10,425	9,865
Deaths per 1,000 population, annual basis	14.5	13.8
Deaths under 1 year of age	635	598
Deaths under 1 year of age per 1,000 estimated live births	57	54
Data from industrial insurance companies:		
Policies in force	69,023,395	67,860,830
Number of death claims	11,799	11,468
Death claims per 1,000 policies in force, annual rate	8.9	8.8

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 January 9, 1937, and January 11, 1936

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Jan. 9, 1937, and Jan. 11, 1936

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936
New England States:								
Maine	1	4	41	5	99	235	0	0
New Hampshire	----	----	----	----	24	42	0	0
Vermont	----	2	----	----	10	117	0	0
Massachusetts	7	12	----	----	930	269	3	5
Rhode Island	1	----	----	----	146	138	1	0
Connecticut	4	4	67	1	170	87	3	1
Middle Atlantic States:								
New York	62	43	[1] 1,783	[1] 17	375	971	9	19
New Jersey	22	15	118	14	437	41	5	3
Pennsylvania	50	84	----	----	83	365	5	10
East North Central States:								
Ohio	28	45	10	14	31	73	3	6
Indiana	16	51	346	39	10	11	2	3
Illinois	30	77	390	57	19	57	9	13
Michigan	11	9	66	1	19	82	2	3
Wisconsin	7	2	655	35	27	77	3	2
West North Central States:								
Minnesota	12	----	25	----	38	122	2	1
Iowa	4	12	2,854	2	6	11	3	5
Missouri	11	37	621	215	2	16	3	1
North Dakota	2	----	66	----	----	27	0	1
South Dakota	----	1	42	----	5	26	0	0
Nebraska	----	9	51	----	1	79	3	0
Kansas	----	12	876	32	8	18	1	3
South Atlantic States:								
Delaware	4	1	8	----	184	203	0	0
Maryland [2]	18	14	61	24	230	98	5	6
District of Columbia	17	22	15	1	16	2	5	5
Virginia	48	25	----	----	112	19	8	8
West Virginia	12	15	76	87	28	2	2	7
North Carolina [2]	45	21	34	9	43	13	2	3
South Carolina [2]	13	1	720	401	16	7	2	0
Georgia [2]	15	13	----	276	----	----	3	3
Florida [2]	13	7	7	5	3	1	7	2

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Jan. 9, 1937, and Jan. 11, 1936—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936
East South Central States:								
Kentucky	14	32	-------	79	199	83	19	8
Tennessee	13	37	318	131	9	1	4	14
Alabama [2]	27	20	250	352	2	21	3	0
Mississippi [3]	5	6	-------	-------	-------	-------	0	1
West South Central States:								
Arkansas	2	16	283	94	2	-------	2	8
Louisiana	13	13	47	15	7	23	0	1
Oklahoma [4]	8	15	140	183	14	1	0	16
Texas [3]	86	74	756	271	160	23	2	11
Mountain States:								
Montana	1	-------	637	7	2	9	4	1
Idaho	-------	2	39	-------	102	61	0	0
Wyoming	7	1	-------	-------	1	4	0	0
Colorado	5	7	77	-------	6	5	1	1
New Mexico	5	4	22	12	10	2	1	1
Arizona	5	7	283	95	78	1	5	3
Utah [3]	-------	-------	-------	-------	126	3	0	0
Pacific States:								
Washington	2	-------	7	-------	32	338	1	0
Oregon	1	12	171	24	8	686	0	0
California [3]	30	32	183	63	126	733	10	4
Total	677	816	12,145	2,561	3,956	5,203	143	174

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936
New England States:								
Maine	0	1	22	15	0	0	2	0
New Hampshire	0	0	4	6	0	0	0	0
Vermont	0	0	9	12	0	0	1	1
Massachusetts	0	1	228	330	0	0	2	0
Rhode Island	0	0	24	26	0	0	0	1
Connecticut	0	0	68	78	0	0	1	3
Middle Atlantic States:								
New York	2	0	687	754	3	0	5	10
New Jersey	0	2	197	158	0	0	4	4
Pennsylvania	0	3	508	536	0	0	11	9
East North Central States:								
Ohio	0	1	234	346	4	0	12	3
Indiana	0	0	174	269	15	3	2	0
Illinois	3	0	473	708	12	19	9	5
Michigan	2	0	421	346	0	0	1	2
Wisconsin	1	0	274	495	11	13	0	1
West North Central States:								
Minnesota	0	0	131	358	13	7	0	1
Iowa	0	0	100	185	33	12	1	0
Missouri	0	0	126	273	47	0	2	1
North Dakota	0	0	30	104	25	16	0	0
South Dakota	0	0	54	100	2	27	1	0
Nebraska	0	0	37	160	8	56	2	1
Kansas	0	0	167	143	13	13	3	8
South Atlantic States:								
Delaware	0	0	19	15	0	0	0	0
Maryland [3]	0	1	106	96	0	0	2	6
District of Columbia	1	0	18	24	0	0	0	5
Virginia	0	0	58	66	0	0	1	1
West Virginia	2	0	60	53	0	0	2	0
North Carolina [3]	0	1	52	31	0	0	4	1
South Carolina [3]	0	2	10	6	0	0	4	0
Georgia [3]	1	0	7	18	0	4	3	3
Florida [3]	0	0	14	5	0	0	1	1

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Jan. 9, 1937, and Jan. 11, 1936—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936	Week ended Jan. 9, 1937	Week ended Jan. 11, 1936
East South Central States:								
Kentucky	0	0	63	86	0	1	8	7
Tennessee	2	1	50	50	0	0	3	0
Alabama [2]	0	0	22	24	0	0	4	2
Mississippi [2]	0	0	11	10	1	0	1	5
West South Central States:								
Arkansas	1	0	18	11	0	0	2	3
Louisiana	1	0	29	18	1	1	11	4
Oklahoma [4]	0	0	17	36	0	0	2	6
Texas [3]	1	0	79	90	4	0	9	4
Mountain States:								
Montana	0	0	35	211	26	34	0	2
Idaho	0	1	28	54	7	2	0	1
Wyoming	0	0	18	91	4	0	0	0
Colorado	0	0	58	167	3	0	0	0
New Mexico	0	0	35	37	0	0	9	6
Arizona	0	0	15	33	0	0	1	0
Utah [2]	0	0	8	97	0	0	0	0
Pacific States:								
Washington	1	0	50	69	5	31	3	2
Oregon	0	1	34	53	27	2	3	3
California [3]	3	7	285	323	12	12	5	9
Total	21	22	5,167	7,176	273	253	137	121

[1] New York City only.
[2] Week ended earlier than Saturday.
[3] Typhus fever, week ended Jan. 9, 1937, 44 cases, as follows: North Carolina, 2; South Carolina, 1; Georgia, 24; Florida, 2; Alabama, 3; Texas, 11; California, 1.
[4] Exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

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

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
October 1936										
Massachusetts	6	16	-------	2	254	1	11	362	0	8
November 1936										
Massachusetts	8	24	-------	1	414	1	1	493	0	6
New Hampshire	-------	-------	-------	-------	-------	-------	0	27	0	0
South Dakota	-------	2	2	-------	12	-------	3	199	40	5
December 1936										
Arkansas	3	27	129	13	3	2	10	45	1	11
Connecticut	2	9	24	-------	486	-------	0	233	0	7
Delaware	1	20	2	-------	217	-------	0	68	0	5
District of Columbia	9	48	8	-------	28	-------	0	60	0	11
New Hampshire	-------	1	10	-------	-------	-------	0	27	0	1
North Carolina	15	310	56	-------	83	13	3	254	2	23
West Virginia	-------	81	297	-------	88	-------	1	236	0	22

October 1936

Massachusetts:	Cases
Chicken pox	330
Dysentery (bacillary)	4
German measles	38
Lead poisoning	3
Mumps	247
Paratyphoid fever	1
Ophthalmia neonatorum	81
Rabies in animals	4
Septic sore throat	6
Tetanus	1
Undulant fever	6
Whooping cough	667

November 1936

Massachusetts:	
Chicken pox	949
Dysentery (amoebic)	1
Dysentery (bacillary)	1
Encephalitis, epidemic or lethargic	1
German measles	45
Lead poisoning	4
Mumps	358
Paratyphoid fever	1
Ophthalmia neonatorum	91
Rabies in animals	14
Septic sore throat	6
Tetanus	2
Trachoma	1
Undulant fever	5
Whooping cough	1,095

November 1936—Continued

South Dakota:	Cases
Chicken pox	52
Impetigo contagiosa	2
Mumps	16
Septic sore throat	1
Trachoma	2
Whooping cough	1

December 1936

Chicken pox:	
Arkansas	30
Connecticut	676
Delaware	96
District of Columbia	110
North Carolina	442
West Virginia	188
Conjunctivitis:	
Connecticut	14
Dysentery:	
Connecticut (bacillary)	5
North Carolina	1
West Virginia	1
Encephalitis, epidemic or lethargic:	
Connecticut	2
German measles:	
Connecticut	30
Delaware	1
North Carolina	23
Lead poisoning:	
Connecticut	1
Mumps:	
Arkansas	22
Connecticut	384

December 1936—Continued

Mumps—Continued.	Cases
Delaware	18
West Virginia	20
Ophthalmia neonatorum:	
North Carolina	1
Paratyphoid fever:	
Connecticut	4
Rabies, animals:	
Connecticut	2
Rocky Mountain spotted fever:	
North Carolina	1
Septic sore throat:	
Connecticut	15
North Carolina	6
Trachoma:	
Arkansas	4
Trichinosis:	
Connecticut	1
Tularaemia:	
District of Columbia	1
North Carolina	1
Typhus fever:	
North Carolina	7
Undulant fever:	
Connecticut	8
Vincent's infection:	
Delaware	1
Whooping cough:	
Arkansas	7
Connecticut	460
Delaware	28
District of Columbia	134
North Carolina	175
West Virginia	164

WEEKLY REPORTS FROM CITIES

City reports for week ended Jan. 2, 1937

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland	0	------	0	0	4	1	0	0	0	4	31
New Hampshire:											
Concord	0	------	0	0	1	0	0	0	0	0	11
Manchester	0	------	0	2	2	5	0	0	0	0	13
Nashua	0	------	--------	0	-------	0	0	-------	0	0	--------
Vermont:											
Barre	-------	------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Burlington	0	------	0	0	0	1	0	0	0	0	7
Rutland	0	------	0	0	0	0	0	0	0	0	7
Massachusetts:											
Boston	1	------	2	6	39	44	0	4	0	149	259
Fall River	0	------	0	0	6	1	0	2	0	0	41
Springfield	0	------	0	3	1	6	0	2	0	8	35
Worcester	0	------	0	36	11	4	0	1	1	25	68
Rhode Island:											
Pawtucket	1	------	0	0	0	0	0	0	0	0	20
Providence	1	------	0	13	11	20	0	4	0	14	66
Connecticut:											
Bridgeport	0	2	1	49	2	3	0	4	0	3	38
Hartford	0	------	0	0	8	7	0	0	0	3	69
New Haven	0	1	0	0	4	1	0	3	0	1	35
New York:											
Buffalo	0	------	1	53	18	12	0	8	0	31	169
New York	26	487	20	49	227	222	0	101	2	85	1,908
Rochester	0	1	1	0	11	5	0	1	0	18	72
Syracuse	0	------	0	21	9	19	0	0	0	25	57

City reports for week ended Jan. 2, 1937—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
New Jersey:											
Camden	2	2	1	1	3	2	0	1	0	2	35
Newark	0	9	0	148	8	12	0	5	0	7	100
Trenton	0	------	0	0	2	2	0	2	0	0	43
Pennsylvania:											
Philadelphia	3	1	1	6	35	142	0	21	4	132	485
Pittsburgh	6	9	3	3	43	64	0	10	1	27	209
Reading	0	------	1	2	3	2	0	1	0	40	23
Scranton	0	------	--------	0	-------	3	0	-------	0	0	--------
Ohio:											
Cincinnati	4	31	9	4	28	11	0	13	1	4	181
Cleveland	5	25	5	1	24	35	0	11	1	31	211
Columbus	3	------	0	1	10	9	0	1	0	13	114
Toledo	0	------	0	0	9	18	0	1	1	19	89
Indiana:											
Anderson	0	------	0	0	3	11	0	0	0	0	16
Fort Wayne	0	------	3	0	4	5	0	0	0	0	32
Indianapolis	0	------	7	1	31	30	0	5	2	10	112
Muncie	2	------	0	0	3	2	3	0	0	0	14
South Bend	0	------	1	0	5	1	0	0	0	0	20
Terre Haute	0	------	0	0	0	1	0	0	0	0	21
Illinois:											
Alton	0	------	0	3	1	1	0	0	0	0	9
Chicago	7	341	66	12	159	176	0	47	2	70	1,082
Elgin	0	5	1	1	2	0	0	0	0	14	15
Moline	2	------	0	0	0	1	0	0	0	4	9
Springfield	3	------	1	1	6	4	0	0	0	11	28
Michigan:											
Detroit	13	56	6	3	39	170	0	14	1	47	385
Flint	1	------	0	0	5	14	0	0	0	5	13
Grand Rapids	0	------	2	2	0	8	0	1	1	19	32
Wisconsin:											
Kenosha	0	------	1	0	2	2	0	0	0	0	11
Madison	0	------	0	0	3	8	0	0	0	1	34
Milwaukee	0	9	9	6	22	34	0	3	0	56	147
Racine	0	------	0	0	2	5	0	0	0	4	21
Superior	0	------	0	0	0	1	0	0	0	6	14
Minnesota:											
Duluth	0	------	0	0	0	15	0	0	0	5	19
Minneapolis	3	------	2	0	15	7	0	2	0	0	112
St. Paul	0	------	0	2	0	11	0	0	0	7	--------
Iowa:											
Cedar Rapids	0	------	--------	0	-------	1	0	-------	0	0	--------
Davenport	0	------	--------	0	-------	1	0	-------	0	0	--------
Des Moines	0	------	--------	0	-------	12	1	-------	0	0	41
Sioux City	0	------	--------	1	-------	8	1	-------	0	0	--------
Waterloo	1	------	--------	0	-------	4	0	-------	0	5	--------
Missouri:											
Kansas City	5	2	1	1	15	42	0	8	1	5	106
St. Joseph	2	------	1	0	1	6	33	0	0	0	21
St. Louis	6	1	1	3	15	42	0	8	2	37	278
North Dakota:											
Fargo	0	------	0	0	1	0	0	0	0	0	12
Grand Forks	0	------	--------	0	-------	0	1	-------	0	0	1
Minot	0	------	0	0	0	0	0	0	0	0	8
South Dakota:											
Aberdeen	0	------	--------	0	-------	2	0	-------	0	0	--------
Sioux Falls	0	------	0	0	0	0	0	0	0	0	6
Nebraska:											
Omaha	0	------	1	1	13	6	1	0	0	2	71
Kansas:											
Lawrence	0	1	1	0	2	0	0	0	0	0	8
Topeka	0	------	1	0	5	7	0	0	0	0	26
Wichita	1	------	0	0	11	3	1	0	0	3	35
Delaware:											
Wilmington	0	------	0	54	7	1	0	0	0	1	36
Maryland:											
Baltimore	3	23	3	120	39	33	0	15	0	75	258
Cumberland	0	------	0	0	1	0	0	0	0	0	6
Frederick	0	------	0	0	0	0	0	0	1	0	3
District of Columbia:											
Washington	5	3	1	11	22	15	0	8	0	14	196
Virginia:											
Lynchburg	0	------	0	3	4	0	0	0	0	0	10
Norfolk	0	------	0	0	2	10	0	0	0	3	33
Richmond	0	------	4	0	13	2	0	6	0	0	79
Roanoke	1	------	1	0	4	0	0	0	0	1	25

City reports for week ended Jan. 2, 1937—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
West Virginia:											
Charleston	1	8	0	0	8	1	0	0	0	0	21
Huntington	0	----	----	0	----	0	0	----	0	0	----
Wheeling	1	----	1	2	4	4	0	0	0	2	17
North Carolina:											
Gastonia	0	----	0	0	0	0	0	0	0	0	----
Raleigh	0	----	0	0	4	2	0	3	0	0	25
Wilmington	0	----	0	0	1	1	0	0	0	1	15
Winston-Salem	1	----	0	1	5	0	0	0	0	0	14
South Carolina:											
Charleston	1	43	0	0	5	3	0	0	0	0	27
Columbia	0	----	0	0	11	0	0	5	0	0	67
Florence	0	----	0	0	2	1	0	0	0	0	11
Greenville	0	----	0	0	0	0	0	1	0	0	12
Georgia:											
Atlanta	6	8	1	1	15	18	0	4	0	0	108
Brunswick	1	1	1	1	0	1	0	0	0	0	5
Savannah	0	20	1	0	2	0	0	1	0	3	35
Florida:											
Miami	0	1	0	0	2	1	0	2	0	0	39
Tampa	2	1	1	0	2	0	0	3	0	0	24
Kentucky:											
Ashland	----	----	----	----	----	----	----	----	----	----	----
Covington	0	2	0	1	5	1	0	2	0	1	21
Lexington	0	----	0	0	3	0	0	2	0	0	26
Louisville	2	6	0	1	15	7	0	2	1	9	75
Tennessee:											
Knoxville	2	----	1	0	9	1	0	2	0	0	58
Memphis	0	----	2	0	10	8	0	4	0	5	108
Nashville	0	----	2	0	15	3	0	1	0	1	85
Alabama:											
Birmingham	2	10	2	0	9	7	0	3	0	0	88
Mobile	1	2	0	0	2	1	0	1	0	0	28
Montgomery	2	----	----	0	----	1	0	----	0	0	----
Arkansas:											
Fort Smith	0	----	----	0	----	6	0	----	0	0	----
Little Rock	5	----	0	0	8	0	1	2	0	0	12
Louisiana:											
Lake Charles	0	----	0	0	1	0	0	2	1	0	8
New Orleans	8	13	3	0	21	10	0	16	1	0	151
Shreveport	0	----	0	0	11	2	0	0	0	0	34
Oklahoma:											
Muskogee	0	----	0	1	0	0	0	0	0	0	----
Oklahoma City	0	6	0	4	16	3	0	0	2	2	54
Tulsa	0	----	----	1	----	2	0	----	0	0	----
Texas:											
Dallas	2	1	1	3	11	5	0	3	0	2	74
Fort Worth	1	----	0	31	10	3	0	2	0	0	45
Galveston	1	----	0	0	0	0	0	0	0	0	17
Houston	16	----	0	1	8	1	1	4	0	3	110
San Antonio	1	----	1	0	11	0	0	8	1	0	78
Montana:											
Billings	0	1	0	0	3	2	0	0	0	0	18
Great Falls	0	----	0	0	3	0	0	0	0	0	6
Helena	0	----	0	0	1	7	0	0	0	0	6
Missoula	0	----	0	0	2	1	0	0	0	0	11
Idaho:											
Boise	0	----	1	0	3	3	0	1	0	0	15
Colorado:											
Colorado Springs	0	----	0	0	2	9	0	4	0	0	17
Denver	3	----	11	7	30	10	0	10	0	27	131
Pueblo	0	----	0	0	1	4	1	0	0	0	13
New Mexico:											
Albuquerque	0	----	0	0	5	5	0	4	3	0	15
Utah:											
Salt Lake City	0	----	0	3	4	7	0	1	0	2	32
Nevada:											
Reno	----	----	----	----	----	----	----	----	----	----	----
Washington:											
Seattle	1	----	0	7	7	3	0	4	0	1	97
Spokane	0	8	0	0	5	9	1	1	0	0	40
Tacoma	0	----	0	0	4	2	0	1	0	0	22
Oregon:											
Portland	0	----	0	0	8	14	0	7	0	9	89
Salem	0	1	----	1	----	1	0	----	0	2	----
California:											
Los Angeles	20	28	0	10	22	20	1	22	0	46	334
Sacramento	2	1	0	0	9	10	0	6	0	0	39
San Francisco	1	3	1	2	12	13	0	8	1	5	212

City reports for week ended Jan. 2, 1937—Continued

State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths	
Massachusetts:			
Boston	1	1	0
New York:			
New York	2	1	0
Rochester	0	1	0
New Jersey:			
Camden	0	0	1
Newark	1	0	0
Pennsylvania:			
Philadelphia	1	0	0
Pittsburgh	2	2	0
Ohio:			
Cincinnati	2	0	0
Columbus	2	0	0
Indiana:			
Indianapolis	0	1	0
Illinois:			
Chicago	2	1	1
Michigan:			
Detroit	2	1	0
Iowa:			
Davenport	1	0	0
Missouri:			
Kansas City	1	1	0
St. Joseph	1	0	0
St. Louis	0	1	1
Maryland:			
Baltimore	1	1	0
District of Columbia:			
Washington	2	0	0
North Carolina:			
Winston-Salem	1	0	0
Georgia:			
Atlanta	3	2	0
Savannah	0	0	1
Florida:			
Miami	0	0	1
Tennessee:			
Memphis	0	2	1
Nashville	1	0	0
Alabama:			
Birmingham	2	1	0
Louisiana:			
New Orleans	0	1	0
Texas:			
Houston	1	0	0
Colorado:			
Denver	1	0	0
California:			
Los Angeles	5	2	1

Encephalitis, epidemic or lethargic.—Cases: Newark, 1; St. Louis, 1; New Orleans, 1.
Pellagra.—Cases: Charleston, S. C., 1; Atlanta, 1; Savannah, 2; Memphis, 1.
Typhus fever.—Cases: Charleston, S. C., 1; Atlanta, 1; Savannah, 5; Galveston, 1; Houston, 1.

FOREIGN AND INSULAR

CUBA

Habana—Communicable diseases—4 weeks ended December 19, 1936.—During the 4 weeks ended December 19, 1936, certain communicable diseases were reported in Habana, Cuba, as follows:

	Cases	Deaths		Cases	Deaths
Cerebrospinal meningitis	1		Poliomyelitis	[1] 7	
Diphtheria	15	1	Tuberculosis	16	1
Malaria	[1] 89		Typhoid fever	[1] 31	1

[1] Includes imported cases.

Provinces—Notifiable diseases—4 weeks ended December 12, 1936.—During the 4 weeks ended December 12, 1936, certain notifiable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Rio	Habana	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer		3		10		2	15
Chicken pox			1				1
Diphtheria		2		1	2	2	7
Leprosy		1	1	2		15	19
Malaria	107	80	40	163	268	847	1,535
Measles	19					1	20
Poliomyelitis		2	1				3
Tuberculosis	10	7	37	20	15	24	113
Typhoid fever	19	29	6	48	6	40	148
Yaws						1	1

EGYPT

Infectious diseases—First quarter 1936.—During the first quarter of 1936, certain infectious diseases were reported in Egypt, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	14	2	Mumps	385	3
Cerebrospinal fever	54	39	Plague	44	35
Chicken pox	574	4	Puerperal septicemia	99	79
Diphtheria	332	150	Rabies		7
Dysentery	336	69	Scarlet fever	17	
Epidemic jaundice	2	1	Tetanus	84	48
Erysipelas	996	181	Tuberculosis (pulmonary)	1,101	627
Influenza	1,743	147	Typhoid fever	668	124
Leprosy	39	17	Typhus fever	1,171	131
Lethargic encephalitis	1		Undulant fever	4	1
Malaria	768	4	Whooping cough	357	22
Measles	1,426	347			

Vital statistics—First quarter 1936.—Following are vital statistics for the first quarter of 1936 in all places in Egypt having a health bureau:

Population	4,710,500	Deaths per 1,000 population	22.9
Live births	56,600	Deaths from diarrhea and enteritis under 2 years	3,802
Births per 1,000 population	48.1	Infant mortality per 1,000 births	124
Stillbirths	1,025		
Total deaths	27,022		

FINLAND

Communicable diseases—November 1936.—During the month of November 1936, cases of certain communicable diseases were reported in Finland as follows:

Disease	Cases	Disease	Cases
Diphtheria	577	Poliomyelitis	15
Dysentery	1	Scarlet fever	1,130
Influenza	1,929	Typhoid fever	27
Lethargic encephalitis	1	Undulant fever	1
Paratyphoid fever	38		

IRISH FREE STATE

Vital statistics—Third quarter 1936.—The following statistics for the Irish Free State for the quarter ended September 30, 1936, are taken from the Quarterly Return of Marriages, Births, and Deaths, issued by the Registrar General, and are provisional:

	Number	Rates per 1,000 population		Number	Rates per 1,000 population
Marriages	4,228	5.7	Deaths from—Contd.		
Births	14,851	20.0	Influenza	61	.08
Total deaths	8,667	11.7	Measles	35	----------
Deaths under 1 year of age	885	(1)	Puerperal septicemia	16	[2] 1.08
Deaths from:			Scarlet fever	35	----------
Cancer	792	1.07	Tuberculosis (all forms)	765	1.03
Diarrhea and enteritis (under 2 years of age)	191	----------	Typhoid fever	18	----------
Diphtheria	67	----------	Whooping cough	45	----------

[1] Deaths under 1 year of age per 1,000 births, 60.
[2] Per 1,000 births.

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

NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for December 25, 1936, pages 1803-1815. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued January 29, 1937, and thereafter, at least for the time being, in the issue published on the last Friday of each month.

Plague

Indochina—Cochinchina—Bentre.—During the week ended January 2, 1937, 1 case of plague was reported in Bentre, Cochinchina, Indochina.

Peru.—During the month of November 1936, 33 cases of plague with 21 deaths were reported in Peru, as follows: Department of Cajamarca, 9 cases, 7 deaths; Department of Lambayeque, 3 cases; Department of Libertad, 19 cases, 13 deaths; Department of Lima, 2 cases, 1 death.

Smallpox

China—Canton.—During the week ended December 5, 1936, 1 case of smallpox was reported in Canton, China.

Typhus fever

Sudan (Anglo-Egyptian)—Geissan Region.—During the week ended December 19, 1936, 8 cases of typhus fever were reported in the Geissan Region, Anglo-Egyptian Sudan.

Yellow fever

Belgian Congo—Mangembo.—On December 22, 1936, 1 fatal suspected case of yellow fever was reported in Mangembo, Belgian Congo.

Nigeria—Uyo.—On December 17, 1936, 1 fatal suspected case of yellow fever was reported in Uyo, Nigeria.