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PUBLIC HEALTH SURVEY OF FORT SMITH, ARK.

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Fort Smith, the second largest city in Arkansas, is situated at the junction of the Arkansas and Poteau Rivers on the Arkansas-Oklahoma State line. It has a mild winter climate, and the mean annual temperature is about 61°. The average rainfall is about 41 inches. It is a natural trade center for a large area. Its commercial importance is indicated by the presence of 88 wholesale and jobbing establishments, and over 600 traveling salesmen living in Fort Smith sell its products over the large tributary area. It has a quite diversified industrial activity. There are 120 industrial plants representing over 200 products, the principal of which are furniture, glass, mirrors, scissors, wheelbarrows, and auto bodies, and there are also zinc and lead smelters.

FINANCIAL

The total assessed value of real and personal property is \$22,767,209.80. This is variously estimated as being from 30 to 40 per cent of the actual value. The tax rate per \$1,000 last year was \$40.68.

The total municipal receipts for 1929 were \$408,454.80, the principal items of which were—

City general 5 mill tax from county.....	\$111,531.33
Privilege tax.....	37,292.38
Automobile licenses.....	31,778.00
Water department receipts.....	156,297.94
Miscellaneous.....	71,555.15
 Total receipts.....	408,454.80

The special 18 mill school tax amounted to \$431,749.95; the principal items of expenditures were as follows:

Police.....	\$50,095.68	Water department.....	\$133,617.25
Fire.....	82,142.28	All other departments.....	56,519.02
Health.....	14,498.85		
Lighting.....	12,233.69	Total expenditures.....	385,626.77
Streets.....	36,500.00		

HOUSING

There is no housing problem in Fort Smith. The price of land is reasonable and houses are usually detached. There are no tenement or slum districts.

WATER SUPPLY

The present source of water supply is the Poteau River, in Oklahoma, about 400 feet from the State line. At the water plant there is a sedimentation basin, capacity 5,000,000 gallons. There are eight rapid sand mechanical filter units of 1,000,000 gallons capacity each. Alum and lime are used as coagulants. There is a clear well with a capacity of 500,000 gallons and provision is made for treating the clear effluent with chlorine. For distribution the water is pumped to two reservoirs. The first, the Bayley Hill Reservoir, with a capacity of 11,000,000 gallons, supplies the lower level. The second, Crowe Hill Reservoir, with a capacity of 3,000,000 gallons, is a high-service reservoir supplying the higher part of the city, the residence district. The water is checked daily and is a safe water. The plant is menaced by flood conditions of the Arkansas River, which is gradually washing away the intervening ground. In a few years a new plant and a new source will be necessary. There are 8,400 services, 90 per cent of which are metered.

SEWERAGE AND SEWAGE DISPOSAL

The city of Fort Smith has a rather complex sewerage system. There are storm water, sanitary, and combined units. There are six outfalls into the Arkansas River from north to south, as follows:

1. Combined sewer, 11 feet 9 inches in diameter.
2. Egg-shaped sanitary, vertical diameter 3 feet, horizontal diameter 2 feet.
3. Storm water, Garrison Avenue, 2 feet in diameter.
4. Cornell Avenue storm water, 5 feet in diameter.
5. Storm water, 5 feet in diameter.
6. Storm water, Johnson and 10th, 4 feet in diameter.

There is also a sanitary 12-inch sewer, no outfall, pumped from a sump to No. 1 combined sewer.

The sewers function well, though there has been trouble in time of flood. In the sewered districts, 8,300 homes have sewer connection and only 140 are unconnected. In the outlying districts there are about 1,000 homes, about 500 of which have approved septic tanks and 500 have unapproved privies.

GARBAGE AND REFUSE

Fort Smith, under an ordinance passed in 1925, has a simple but effective system of collection and disposal of garbage. Garbage and refuse are combined. Collection in the business, or fire, district is made daily; in the residence district, weekly. The collection in residence districts is free, while in the business section fees are charged ranging from 50 cents to \$6 per month according to the type, size, and purpose of the building. The daily collection in the business district is made by two dump-body trucks. In the residence district 11 wagons are used. After wagons have been loaded, the horses are unhitched and two or three wagons are linked together and drawn by a truck to the incinerator. No salvage is attempted, and refuse is burned in the incinerator, the refuse serving as fuel to dry and consume the garbage.

CITY ORGANIZATION

There is a commission form of government, consisting of the mayor and two commissioners. The mayor has charge of the department of public affairs, which includes the mayor's department, the legal department, and the police department.

One commissioner (A) has charge of the department of accounts and finance and the department of health and public safety (health, fire, garbage, building, plumbing, and sanitary).

The other commissioner (B) has charge of the department of public works and public property—the engineering department (sewers, streets, lights, cemetery, parks, and water supply).

The joint health organization has a board of health, made up of commissioner (A), the county judge, and a third member selected by these two who must be a Fort Smith practicing physician.

ORGANIZATION OF HEALTH DEPARTMENT

There is an unique situation in Sebastian County in that it has really two county seats—the Greenwood district with Greenwood as a center and the Fort Smith district with a section of the county and the city of Fort Smith. All taxes are collected by the county and such amounts are paid back to the city as is required by law (5 mills general city tax). Joint expenditures are made on the basis of one-third by county and two-thirds by the city of Fort Smith.

Fort Smith and its outlying districts make up a population of about 40,000; the remainder of the population in the section of the county included in the Fort Smith district is small.

Regardless of the joint county and city health organization, for all survey purposes we may consider the Fort Smith district as an expanded city of Fort Smith, with a population of 40,000. The joint city and county organization is responsible for two nurses who went

on duty January 1, 1930, one in the Greenwood district and one in the Fort Smith district. Fort Smith city has, with this nurse, the following personnel in the health department:

Title	Salary	Time employed
1 health officer.....	\$4,000	Full time.
1 deputy health officer.....	1,200	Part time.
1 veterinarian.....	1,980	Full time.
1 milk inspector.....	2,400	Do.
1 food inspector.....	1,740	Do.
1 sanitary inspector.....	1,740	Do.
1 chemist and bacteriologist.....	2,220	Do.
1 clerk.....	900	Do.

In addition to this personnel and the nurse recently assigned to Fort Smith by the joint board, and a school nurse employed by the board of education, the only unofficial agency doing health work in Fort Smith is the Metropolitan Life Insurance Co., which employs one nurse.

HOSPITALS

There are two good hospitals in Fort Smith. St. Edwards Mercy Hospital, operated by the Sisters of Mercy, is an excellent institution, partly new, and the remainder renovated in modern fashion. It is self-supporting, has 108 beds, 56 private rooms, 5 two-bed rooms, and 42 ward beds, with rates from \$3 to \$5 per day. It has 15 maternity beds, with 135 deliveries last year—126 live babies and 9 stillbirths. It had 685 surgical and 665 medical cases. It is open to members of the local medical society. It has a training school, with 40 pupil nurses, giving a 3-year course and with entrance requirements of graduation from a high school. It has no out-patient department, but has space with separate entrance which could be used for such a purpose. The Sparks Memorial Hospital has 100 beds—75 for white and 25 for negro patients. There are 10 maternity beds and there were 67 deliveries last year. The hospital is self-supporting, with a low rate of \$2 for its negro beds and a rate of \$3 to \$5 for whites. It has a training school with 34 pupil nurses, a 2½-year course, and requirements of high-school graduation. It is open to the local medical society. It has no out-patient department. Both these hospitals were very receptive of the idea of establishing out-patient departments, provided the medical society could arrange such facilities without financial loss to the hospital. Both hospitals have good operating rooms, X-ray and laboratory units, and both are approved by the American College of Surgeons.

Hospital bed accommodation in Fort Smith must be considered adequate. Two hundred beds furnish the accepted requirements of 5 beds per 1,000 population. A second criterion for judging adequacy is percentage of occupancy. One of these hospitals, with

capacity for 36,000 hospital days, actually furnished 15,000 hospital days' service, or a percentage of occupancy of less than 50 per cent. The greatest lack is in out-patient service. A hospital to-day without an out-patient department is seriously limiting its service to the public. It gives early diagnosis and treatment and prevents many cases from becoming hospital bed cases. It should furnish diagnostic clinic service to cases sent in by physicians. These cases should then be referred back to their physicians.

VITAL STATISTICS

The city clerk is registrar of vital statistics. It would be more convenient if these records were in the health department. Still, the city clerk's office is only three blocks away and a register is kept there which could be consulted daily by the health officer. The original certificates are sent to the State board of health, and the only check on their accuracy or completeness is the little that can be done by the competent but inadequate personnel of the State. There is no prompt utilization locally of these records of births and deaths. To improve reporting, rates are computed by the State health department and sent back after a year. There is an annual tabulation of deaths by cause, by color, and by age under 1 year by the State department. The enormous fluctuation in infant mortality rates in 5 years, for instance, 107 in 1924 to 44 in 1928, does not indicate reduction in the rate but probably better reporting.

COMMUNICABLE DISEASE CONTROL

Reporting.—One need only check the cases reported against the deaths reported of any of the common communicable diseases to understand how poorly these diseases are reported.

Reporting of communicable diseases—Ratio of cases to deaths

Disease	Average for 3 years		Ratio of cases to deaths	Standard ratio
	Deaths	Cases		
Diphtheria.....	5	47	9	15
Typhoid.....	13	35	3	10
Scarlet fever.....	1	30	30	50
Measles.....	5	410	82	60

Measles is the only one of these diseases adequately reported.

An epidemiologic card is made out for typhoid fever only. Spot maps are not kept. Chronological charts showing prevalence by weeks are not kept.

Diphtheria control.—Cultures of contacts evidently are not made, as only 76 diphtheria examinations were made in laboratory. Diphtheria cases are released only after two negative cultures.

Typhoid fever control.—There is one visit to a typhoid fever case for epidemiologic record. Cases are not quarantined and no cultures are taken for release.

Smallpox.—One hundred and sixty-five vaccinations for smallpox were made, and contacts are said to be vaccinated. All school children are vaccinated in the first grade.

Visits to cases.—An average of one visit to each case is made, and the health officer renders final opinion in doubtful cases.

Hospitalization.—There is no hospital for contagious diseases in Fort Smith.

Immunization.—There is no record of toxin-antitoxin injections nor of the use of the Schick test. First-grade school children are vaccinated. The health officer gave 376 typhoid vaccine injections to charity patients.

Venereal disease control.—There is no system of venereal disease control in effect. Those diseases are not reported except from clinics. Practically all cases reported (an annual average of 75 cases) discontinue treatment without permission and vanish from clinics uncured. There is no follow-up and no effort made to discover sources of infection and other cases.

Tuberculosis control.—Case finding: There is no effort made to find cases. An average of 53 deaths were reported in the past three years. No new cases were reported and no visits were made. There is no register of tuberculosis cases kept. There is no tuberculosis clinic; but if a case is found among the sick poor who come to the health department, the patient is sent to the county hospital (20 beds) or to the State sanatorium.

MATERNITY HYGIENE

There is no plan for nor work done in maternity hygiene by the health department. There are two excellent hospitals (St. Edwards and Sparks) which have standard obstetrical facilities, and in these there were 200 deliveries made under favorable conditions during the year. About 160 of the mothers were residents of Fort Smith. There is a relatively small number of midwives, mostly colored, operating in the district. Formerly, when the health department had a public-health nurse, there was registration and instruction of midwives, but nothing of that nature is being done now. There are no prenatal clinics and no prenatal visiting. No women are registered three or more months before confinement except with private physicians. The Metropolitan Insurance Co. nurse, in her routine of visiting, makes some visits to pregnant women, but this is casual and can not be called prenatal work.

INFANT HYGIENE

There are no baby welfare clinics, either official or unofficial. There are no public health nurses in the health department (January, 1930) for follow up or visiting the new-born babies or babies under one year.

The Metropolitan nurse, in the course of her work, sees and gives advice concerning new-born babies, but it is incidental and not according to plan.

PRESCHOOL HYGIENE

There is no preschool hygiene work being done, because of lack of the other activities in public health nursing which furnish access to the preschool child.

SCHOOL HYGIENE

There is an enrollment of 7,881 pupils in all the schools of Fort Smith. There is one very well trained and efficient public health nurse employed by the school board. The following report of her work shows a remarkable total and a very intelligent distribution of her time:

Year 1928-29 (September, 1928, to May, 1929, inclusive)

Number of school visits.....	371
Number of days assisting physicians in schools.....	6½
Number of individual inspections.....	8,597
Number of vaccinations.....	235
Number of health talks.....	5
Number of children weighed.....	19,846
Number of hearing tests made.....	2,384
Number of vision tests made.....	4,183
Number of cases given first aid.....	5
Number of children taken to clinics.....	171
Number of consultations at schools.....	6
Number of home visits.....	548
Number of other calls.....	46
Number of children excluded from school.....	70
Number of skin diseases found:	
Scabies.....	30
Pediculosis.....	9
Ring worm.....	2
Others.....	8
Total.....	49

Through the cooperation of local dentists it has been possible for 156 children from indigent homes to have dental care, a very worthwhile piece of work, since defective teeth are a serious handicap to the health of children.

The nurse pays the physicians the following tribute:

Doctors, too, deserve much credit for their splendid efforts. They have responded to every call. Almost every parent-teacher organization sponsored a summer round-up program and each of them called upon doctors for assistance. Frequently children from schools were taken to doctors for examinations and treatments. Several doctors gave their time to removing the tonsils of 26 charity cases. The hospitals made no charges for these cases. Eye operations were performed on two children, one of them being almost entirely blind since birth. After several operations the eyesight is very much improved, and the doctors think she may be able to attend school next fall. Had it not been for this work she would have been sent to the blind school.

Nurse's report from September, 1929, to January, 1930

Number of visits to schools.....	155
Number of days assisting physicians in schools.....	3
Number of individual inspections.....	4, 196
Number of vaccinations.....	31
Number of health talks.....	1
Number of children weighed.....	8, 454
Number of vision tests.....	3, 435
Number of hearing tests.....	3, 435
Number of children given first aid.....	2
Number of children taken to clinics.....	46
Number of miscellaneous cases.....	4
Number of home visits.....	156
Number of other calls.....	25
Number of sick children excluded from school.....	3
Number of skin diseases:	
Scabies.....	2
Pediculosis.....	2
 Total.....	 4

An average of 30 minutes a day is spent in health instruction in all of the elementary schools. The high school spends 20 minutes a day in physical education.

List of defects found by nurse's inspection

WHITE SCHOOLS, 1928-29

Number of children inspected.....	3,689
Number of children having defects.....	3,145

Defect	Number found	Number corrected	Defect	Number found	Number corrected
Vision.....	131	40	Dirty teeth.....	520	283
Hearing.....	88	(1)	Other.....	552	183
Tonsils.....	1,492	179	Total.....	14,607	1,964
Teeth.....	4,992	1,349			

WHITE SCHOOLS, 1929-1930

Defects	Number	Defects	Number
Vision.....	119	Dirty teeth.....	52
Hearing.....	61	Other.....	72
Tonsils.....	1,426	Total.....	6,521
Teeth.....	4,801		

¹ No report.

Number of children whose tonsils have been removed

White.....	607
Colored.....	4
Total.....	701

List of defects found by physicians' examinations in colored schools

Number of children examined..... 462

Defect	Number found	Defect	Number found
Teeth.....	178	Speech.....	1
Eyes.....	23	Spine.....	4
Ears.....	24	Nose.....	4
Tonsils.....	125	Mental nerve.....	1
Adenoids.....	100	Skin.....	2
Heart.....	16		
Glands.....	17	Total.....	494

*Underweight children***WHITE**

Date	Per cent of under-weight children		Per cent of children 10 per cent under-weight	
	Boys	Girls	Boys	Girls
September, 1928.....	79.5	77.2	32.8	34.5
May, 1929.....	68.9	70.6	21.3	24.5
September, 1929.....	68.3	70.5	26.6	30.8

COLORED

September, 1928.....	71.2	60.5	22.5	22.2
May, 1929.....	35.7	57.4	13.0	19.1
September, 1929.....	78.0	69.0	24.7	30.7

The colored schools were furnished milk during the two preceding years but were not furnished it during 1929.

Number of children entering school in September, 1929..... 550

Number of these children examined by doctors in May, 1928..... 300

Number of these children examined by doctors in September, 1929..... 405

These examinations were sponsored by the parent-teachers associations, and reports were sent to the State association, and only one school kept a duplicate copy.

DuVal School

Number of children examined..... 48
 Number of children having defects..... 42
 Number of 100 per cent children..... 6

Defect	Number	Correc-tions	Defect	Number	Correc-tions
Hernia.....	2		Eyes.....	1	
Glands.....	5	1	Ears.....	6	3
Heart.....	1	1	Circumcision required.....	15	1
Adenoids.....	4	4	Underweight.....		14
Tonsils.....	15	7			
Teeth.....	14	4	Total.....	63	36

Free medical examinations by the local physicians and the work done by the school nurse are the bright spots in public health work in Fort Smith. The nurse, with over 7,000 pupils, is carrying an overload and needs help, but she has covered a surprisingly large part of her field. Absentees are very intelligently handled. An attendance director visits the home and if the absence is due to illness, the school nurse is notified.

FOOD AND MILK CONTROL

There is no instruction of food handlers except by the food inspector and the health officer in his examinations of food handlers. All food handlers are examined every 90 days. The examination is superficial and no laboratory tests are made unless obvious clinical signs are present. There is an active inspection of food establishments by a full-time food inspector. A summary of his report follows:

Inspections, 1929

Restaurants and cafés-----	814	Bakeries-----	62
Fruit stands-----	75	Packing and meat houses-----	6
Grocery stores and meat markets-----	956	Bottling works-----	12
School cafeterias-----	43	Tourist camps-----	18
Fountains (soda)-----	216	Orders to improve sanitation-----	93
Rooming houses-----	161	Rechecks-----	381
Barber shops-----	214		

MEAT INSPECTION

There is a municipal abattoir where all animals must be slaughtered under direct supervision of a graduate veterinarian. The personnel paid by the city consists of one veterinarian at \$165 per month, and one laborer at \$50 per month. Other labor for slaughtering and preparing meat for market is furnished by the butchers. The fees are, each—

	Cents		Cents
Beef cattle-----	65	Hogs-----	35
Calves-----	30	Sheep and goats-----	30

Financial statement regarding abattoir

Receipts from fees (city two-thirds), 1929-----	\$3,088.81
Expenses (city two-thirds), 1929-----	3,019.11

This statement does not include original cost of construction, interest, or depreciation.

MILK INSPECTION

There is a full-time milk inspector operating under a model ordinance. The following table shows the work done. About one-half the supply is pasteurized.

Work of dairy inspector for year 1929

Number of visits to dairies	915
Number of pasteurizing plants inspected	48
Number of dairies scored	308
Milk inspections on delivery trucks	816
Number cows tuberculin tested	2, 581
Dairies condemned	2
Cows condemned for tuberculosis	2
Milk samples collected for analyses	816
Cream samples collected for analyses	31

SANITATION

A full-time nuisance inspector is employed on nuisances. A summary of his report follows:

Inspections made:

Insanitary yards	25
Insanitary water holes	37
Insanitary alleys	481
Insanitary vacant property	55
Insanitary chicken lots	49
Insanitary cow lots	46
Insanitary buildings	33
Insanitary hog pens	17
Insanitary basements	3

Orders:

Orders to have weeds and grass cut	564
Orders to get garbage cans	308
Orders to get garbage-can lids	58
Orders to keep garbage cans covered	97

LABORATORY

There is a well-equipped laboratory, and the city chemist, who is also a bacteriologist, is in charge. He made 1,795 laboratory examinations in 1929. Almost 50 per cent were for milk. The next largest item is an almost daily check of the city water supply. The city chemist did 205 Wassermann reactions. Some readjustment of his time could be made to permit more work in diphtheria, typhoid, and tuberculosis examinations.

Laboratory work for year 1929

	Number
Diphtheria	76
Gonococci smears	32
Malaria examinations	11
Rabies	9
Sputum for tuberculosis	29
Wassermann reactions	205
Urine analyses	167
Milk analyses	816
Cream analyses	31

	Number
Alcoholic beverage analyses	49
City water analyses	292
Well water analyses	22
Meningitis tests	2
Human milk examinations	1
Country butter analyses	2
Widal examinations	16
Trench mouth analyses	1
Diazo analyses	18
Vincent's angina analyses	11
Gasoline analyses	4
Examinations for dope	2
Throat examinations	1
Streptococcus examinations	1
Spirilla analyses	1
Boiler compound analyses	1
Spring water analyses	1
Examinations of water from coolers	3

SUMMARY OF HEALTH WORK DONE IN FORT SMITH

There are 12 major divisions of public health work which should, together, constitute a well-rounded program for a health department. There are three other activities which are found only in highly developed organizations and in cities larger than Fort Smith. For this reason cancer control, heart disease control, and mental hygiene are omitted, and their absence from the program will not be considered a defect in Fort Smith's organization. The 12 major activities, which should exist and be developed in any well-rounded health department program are the following:

1. Vital statistics.
2. Communicable disease control.
3. Venereal disease control.
4. Tuberculosis control.
5. Maternity hygiene.
6. Infant hygiene.
7. Preschool hygiene.
8. School hygiene.
9. Food and milk control.
10. Sanitation.
11. Laboratory.
12. Popular health instruction.

Of these 12 major activities, Fort Smith is executing 4 in a manner which can be classed as average or better. These activities are as follows:

1. *School hygiene*.—This work is done largely by a nurse employed by the board of education with assistance from local physicians and dentists. She has the hearty cooperation of the school authorities and teachers. The work can be classed as excellent.

2. Food and milk control.—This includes examination of food handlers by the health officer and the work of two full-time inspectors, one for food and one for milk. It also includes the meat inspection and slaughtering in the municipal abattoir under supervision of a veterinarian. This work is classed as good.

3. Sanitation.—This includes water supply, sewage disposal, abatement of nuisances, and collection of garbage and refuse. This work is classed as good.

4. Laboratory.—This activity by the readjustment of the work, with greater accent on communicable diseases, and with the present man in charge, could easily be classed excellent. The work as now done is classed as good.

With the exception of school hygiene, carried on by a public health nurse employed by another department of city government, these activities are all in the category of things done for the people by the municipal government under its police powers. We expect cities to provide a safe water supply, sewage disposal, food and milk regulation, abatement of nuisances and collection of garbage and refuse, as a matter of law and ordinance enforced by police power. These things should run automatically without taking any time of the health officer. So that even in the things classed above as being done and rather well done, they are done without using up any considerable part of the time of the health officer.

The other eight activities, which are of far greater importance in terms of lives saved and disease prevented, have received very little attention from the health officer, and have taken very little of his time.

1. Vital statistics.—Vital statistics are collected by the State board of health. The registrar is the city clerk. No utilization of these statistics is made currently, daily, or weekly for checking their accuracy, for checking reporting of cases, or for making spot maps and chronological charts of the progress of diseases by weeks.

2. Communicable disease control.—With the exception of typhoid fever no epidemiologic cards are kept for these diseases. An average of one visit is made instead of an average of at least four visits. Diphtheria patients are released from quarantine only after two negative cultures, but control of other diseases is not in evidence. Immunization against smallpox is required in the schools. There is no record of immunizations done for diphtheria nor of the use of the Schick test.

3. Venereal disease control.—There is no systematic effort to find and treat sources of disease, no check on incomplete reporting, and no follow-up work.

4. Tuberculosis.—Patients who present themselves for sick relief or who call for such relief in their homes would presumably be cared for, but there is no reporting of tuberculosis; no register is kept, there

is no visiting of cases, and no effort is being made to find incipient cases.

5. *Maternity hygiene*.—There is no program for maternity hygiene, and no prenatal work is being done. Midwives are not registered, and there is no instruction of midwives in regular classes.

6. *Infant hygiene*.—There is no well baby clinic, and no visiting of the new born or other babies under one year.

7. *Preschool hygiene*.—With no visiting nurses operating, the most promising approach to preschool children is cut off. Therefore no preschool hygiene is done.

8. *Popular health instruction*.—No systematic plan for popular health instruction exists and practically nothing is done.

With the above summary of work done and of work not done, two questions naturally arise: (1) Why are the most promising activities in public health work neglected? (2) If the work done is under municipal law and ordinance, more or less automatic, requiring (with the exception of examination of food handlers) no time of the health officer or his assistant, how do these officials occupy their time? I shall answer these two questions as follows, taking up the second question first:

(2) The time of the health officer and of his full-time assistant is taken up as follows:

Charity sick calls	3,449
Hospital calls, sick poor	1,800
Jail calls to sick inmates	878
Confinement cases	30
Office examinations	3,966
Prescriptions given	2,384
Office treatments given	1,096
Visits contagious diseases	268

If we exclude the 268 contagious disease visits and the office examinations of food handlers, the entire time of the health officer and his part-time assistant is devoted to what is nothing more than a system of sick poor relief. This is the reason that the health officer has no time for the development of public health activity on modern lines in communicable disease control, tuberculosis, maternal, infant, and child hygiene.

The health officer, Doctor Johnson, receives \$4,000 salary for full-time service, and his assistant, Doctor Redmone, \$1,200 per annum for part-time service. Under these conditions Doctor Johnson's title is a misnomer, he is really city physician for sick poor relief. In justice to Doctor Johnson it must be said that he inherited the present policy of sick poor relief which had been started many years ago and has grown to abnormal proportions. He has been unable to change this policy of considering sick poor relief as the major factor

in the health officers' work. Public demand based on old custom has kept Doctor Johnson so busy with what is not really health work that he has had little chance to do constructive work in building a health department on modern lines.

The table already given will show the great volume of work in sick poor relief. It is incredible that any such numbers of sick poor should demand treatment in a city the size of Fort Smith. The system has been popular, it has not been discouraged, and there is no systematic check on whether the beneficiaries are really indigent.

(1) These fields are neglected, first, because the health officers' time, with the exceptions noted, and the entire time of his part-time assistant are absorbed by the work of sick-poor relief. Then, too, the development of these essential public health activities depends upon the work of public health nurses and there are no nurses on the pay roll of the city health department.

REMEDIES

Having stated the major defects, concentration upon an activity which is not public health, viz, sick poor relief, lack of a constructive plan in modern public health development, and lack of the public health nursing personnel to carry out such a plan, it is pertinent to consider remedies for the correction of these defects. First of all provision must be made for the removal of sick poor relief from the health department. This is the crux of the situation. If the health officer can be relieved of this burden, his time will be released for planning and executing a comprehensive plan for what does not now exist, viz, adequate control of communicable disease, tuberculosis, maternal and infant mortality, and child hygiene. Public health nurses can then be employed to carry out such a plan. The most logical procedure is (1) to find some means of reducing the volume of this sick poor relief to beneficiaries who are really indigent and who are bona fide residents of Fort Smith; (2) to find or create some agency which will absorb this work and care for the sick poor.

In regard to the method and machinery by which this sick poor relief should be reduced and limited strictly to indigent citizens of Fort Smith, it is not felt that it is within the province of the writer to give an opinion; it is a matter for the municipal government of Fort Smith and, perhaps, the community chest to determine. It is not a public health matter and I only mention it because it has a bearing on the ease with which some other agency can take over this burden of sick poor relief from the health department.

In regard to the agency or means by which the health department can be relieved of sick poor relief, I have definite recommendations to make.

The Sebastian County Medical Society.—The medical society holds the solution of the problem in its hands. It is an unusually progressive and public spirited body, in which a spirit of harmony is evident, which also is none too common. I had the privilege of addressing their annual meeting on January 14, 1930, and stressed the collective obligation of medical societies to solve one of our greatest sociologic problems, viz, How can every citizen secure the best medical, surgical, and preventive advice and treatment at a price within his ability to pay? Reference was then made to the local problem and it was suggested that they find means of taking this burden of sick relief off the shoulders of the health department, and that the most logical plan would be to develop out-patient departments in two of the local hospitals. As noted in this report, there are two exceptionally well equipped hospitals in Fort Smith—the St. Edwards and the Sparks Memorial. The executive direction of both hospitals is receptive to such a development. The space with a separate outside entrance is already available in one of them.

The president of the medical society, Doctor Buckley, promptly called another special meeting for further explanation and development of the plan. As a result, a resolution was passed and a committee was appointed to secure promptly all information and to report back to the society.

It is believed that a well-conducted out-patient department could absorb a great part of the present sick relief burden. Some of the patients now treated could pay a small fee, and the really indigent cases could be charged to the city at a low nominal rate.

Public health nurses.—As in many other cities similar to Fort Smith, the development of sanitation and health protection under police powers by law and ordinance has gone far ahead of development of the work in communicable disease control, tuberculosis, and maternal and infant mortality. These latter activities are largely educational and depend upon securing the voluntary cooperation of individuals. This development can be carried out effectively only by public health nurses. Under ordinary circumstances greater dividends in life saving and disease prevention can be secured by money spent for public health nurses than by any other investment in public health work. Eventually a considerable staff will be necessary for public health work in Fort Smith. It is a wise policy to begin gradually and make demonstrations which will warrant expansion. One public health nurse to each 2,000 of the population is an ideal proportion. It is highly probable that in a few years the need and worth of at least 12 public health nurses in Fort Smith will be appreciated.

For reasons given, a very modest recommendation is made, viz, That at the earliest possible moment provision be made for the employment of three public health nurses in Fort Smith. With the

school nurse and one nurse attached to the county health unit, there will then be a total of five nurses in 1930. This is a modest beginning, but as the work is better understood and appreciated, others can be added to the staff.

**REGULAR SESSION OF THE PERMANENT COMMITTEE OF
THE INTERNATIONAL OFFICE OF PUBLIC HYGIENE,
OCTOBER, 1929¹**

The Permanent Committee of the International Office of Public Hygiene held its regular 1929 session at Paris from October 21 to 30, 1929.

Those present were: Messrs. Velghe (Belgium), president; Hamel (Germany), van Campenhout (Belgian Congo), Madsen (Denmark), Shahin Pacha (Egypt), Murillo (Spain), Rupert Blue (United States of America), Barrère (France), L. Raynaud (Algeria), Boyé (French Equatorial Africa), Duchêne (French West Africa), L'Herminier (Madagascar), G. S. Buchanan (Great Britain), Phipson (British India), McCallum (Australia), F. X. Le Noblet du Plessis (Canada), S. P. James (New Zealand), P. G. Stock (Union of South Africa), G. Natarangas (Greece), A. Lutrario (Italy), M. Tsurumi (Japan), P. Schmol (Luxemburg), Colombani (Morocco), de la Torre (Mexico), de Castro (Monaco), K. W. Wefring (Norway), N. M. Josephus Jitta (Netherlands), W. de Vogel (Netherlands Indies), Djavad Achtiany (Persia), W. Chodzko (Poland), Ricardo Jorge (Portugal), Cantacuzène (Rumania), C. Kling (Sweden), H. Carrière (Switzerland), L. Prochazka (Czechoslovakia), de Navailles (Tunisia), Hussameddin (Turkey), Syssine (Union of Socialist Soviet Republics), Herosa (Uruguay), G. Yoannovitch (Yugoslavia), and M. Abt, Director of the International Office of Public Hygiene.

There were also present at the meetings of the committee Maj. J. Gilmour, president of the Sanitary Maritime and Quarantine Board of Egypt, and Dr. C. L. Park, acting medical director of the health section of the League of Nations.

I

The questions bearing on the application of the International Sanitary Convention of 1926 occupied, as in previous sessions, the attention of the committee in the quarantine commission as well as in plenary assembly.

1. The provisions of article 28 of the convention relating to the periodic deratization of ships (or the declaration of their noninfesta-

¹ Translation.

tion by rats) should be applied in conformance with the letter and the spirit of the article. A distinction must be made between the system of permanent and concerted action thus provided as much in the interest of navigation as in that of international public health, and the measures set forth by the articles of the convention applying especially to "infected," "suspected," or "uninfected" ships ("free" from plague), it being understood that, in the last case, deratization can be required (according to the terms of art. 27) only under exceptional conditions, such as the loading in an infected port of a cargo likely to attract rats and stowed so as not to allow efficient inspection.

As concerns the application of article 28, the committee considers it rational not to require that, as a matter of routine, every ship be inspected on its arrival for the presence of rats on board; if a valid certificate, that is, one issued within six months in a port designated by the International Office of Public Hygiene as qualified for that purpose,¹ is presented, inspection should be made only under very exceptional conditions. Such is the principle which inspires the new regulations which will shortly be in force in England.²

But, in order that the certificate (of deratization or exemption) be accepted, it is obviously necessary that it be worded in an explicit and complete manner. Quite a number of countries have already adopted the model established by the Office,³ and it would be desirable to make this adoption general.

Furthermore, it is necessary that the certificate bear the signature of the sanitary authority of the port where it was issued.

As concerns the procedure to be used in the deratization of ships, the committee is of the opinion that, as to the periodic deratization in execution of article 28 of the convention, nothing would force the authority of the port (qualified) which issues the certificate to use one procedure rather than another in order that the certificate thus issued be valid. The authority has the right to exempt the ship from periodic deratization; with more reason he should have the right to choose the method which he considers efficacious in carrying out the work, if he thinks it necessary.

Furthermore, as concerns a ship which does not come from a port infected by plague and which is not itself infected, account should be taken of the certificate presented by the ship until the expiration of the full six months' period (or seven, according to the terms of the third paragraph of art. 28) for which it was issued, whether there are rats on board or not.

¹ A second complete list (to Nov. 15, 1929) of ports thus designated by the Governments according to the terms of the International Sanitary Convention (art. 28) has just been published and distributed by the International Office of Public Hygiene to the sanitary administrations of the different countries. This publication annuls and replaces the preceding ones, consisting of a preliminary list and four supplements.

² See Bulletin of the International Office of Public Hygiene, Vol. XXI, 1929, p. 1872.

³ *Idem*, Vol. XX, 1928, p. 295.

The case of new ships, or, rather, those not yet having had six months of service, was especially considered by the committee. The convention did not foresee this situation, but it is not impossible to imagine that a ship before ever having been placed in service may be invaded by rats attracted by the scraps of food left by the workmen or for some other reason. In several countries the sanitary authorities, relying on experience in this direction, desire to hold to the very letter of article 28, which authorizes deratization or inspection in view of exemption "if no valid certificate is presented." The committee believes, therefore, that it should especially recommend to ship owners that when a new vessel is equipped they have it inspected by the sanitary authorities of the port and furnish it with a certificate even for the first six months of navigation.

Other similar matters have been reported to the committee, which, according to the method adopted, which method has already produced favorable results, has entrusted to the delegates of the interested Governments the task of regulating, if possible, the difficulties thus encountered.

2. The question of bills of health, under the recommendations of article 49 of the convention, still presents a triple problem:

(1) Certain countries require no bills (and so would look willingly upon the general abolition of them); others, perhaps, would also be disposed to abolish them.

(2) A rather important number of countries do not believe that they can yet do without the bill, but several would favor the abolition of the consular visa.

(3) The other countries—especially in America—always consider the consular visa an essential guarantee, but they are ready (if they have not already reduced it) to reduce the charge greatly.

The French Government has sent to the International Office of Public Hygiene a new communication on the subject of bills of health, important not only as concerns the reduction of the charges for the consular visa (lowered in France to one-fifth of what they were before the new regulation), but from the point of view of agreements to be concluded for the suppression of the visa. The British Government is also ready to take this view as concerns the ports of the United Kingdom. Similar declarations have been made by the delegates of the Governments of Germany and the Netherlands, which have just joined with the equally favorable intentions expressed by other Governments in former sessions of the committee.

It seems, consequently, that the office should take positive steps to bring about agreements between countries having the same points of view in this matter.

3. In conformance with the decision made by the committee in its preceding session, a report (which will be published in the bulletin

of the office) on the use of the wireless in quarantine operations has been prepared by Doctor Stock, delegate from the Union of South Africa, from the results of an investigation previously made.

The committee has reported again that it will be impossible to institute, obligatorily, by means of a general regulation, special privileges for ships which have sent a sanitary declaration by wireless; it also reports that the use of such messages tends to spread more and more, and that both navigation and the sanitary administrations find it reciprocally advantageous. To generalize and to make this usage as uniform as possible by the adoption of a simple and practical form message is the goal to strive for, and the committee has been of the opinion that the office ought to make a precise and final recommendation to the sanitary administrations of the different countries.

It would consider the following form as corresponding best, in a general way, to the conditions which may be presented in practice:

Moden.⁴

- A. What is the name of your ship and its port of registry?
- B. What day and at what time do you intend to arrive?
- C. What was your port of departure (first loading port) and your last port of call?
- D. Have you at present, or have you had during the last 15 days, cases of infectious diseases or suspected cases on board? If so, how many cases and what diseases?
- E. Have you at present cases of other diseases on board? If so, how many?
- F. Have you had deaths from disease (infectious or not) on board during the course of the voyage? If so, how many?
- G. Have you a doctor on board?
- H. Do you wish to land any patients? If so, how many, and what disease(s)?
- I. What is the number of your crew? Have you passengers on board? If so, how many?
- J. Do you intend to land any passengers? If so, how many, and what class?

It has been understood that, in transmitting to the Governments and to the sanitary administrations for eventual consideration in their port instructions to navigation, the form thus established and the complementary provisions of the report (delay in sending message, etc.), the office should request that in cases where these provisions and this form are adopted this adoption be reported to it so that it may advise the other Governments.

4. The committee did not occupy itself long with the question of ships' doctors. In the solution of this matter proper action has been taken by the International Office of Public Hygiene, the developments of which must be awaited. However, in order to hasten this as much as possible it will doubtless be useful to send to the large shipowners' associations, international as well as national, the report

⁴ Code word meaning "International quarantine message," already provided by the International Commission for the Code of Signals.

of Doctor Lutrario, delegate from Italy, already sent to the Governments by the office, calling their attention to the fact that an adequate regulation of the condition of ships' doctors is desirable, not only from the point of view of public health but also from that of their own interests.

Several Governments have already reported that they were considering the question. The Greek Government, especially, is preparing a fundamental reform in the institution of ships' doctors. In Great Britain the professional instruction of these doctors has received special attention, and the report sent by the office was submitted to the examination of a mixed commission of the Ministry of Health and the Board of Trade.

5. The report made in conformance with the decision of the preceding session on the question of rat guards by Doctor Park, then delegate from Australia, will be published in the Bulletin. New communications have, moreover, been made by the delegates from Spain, the United States of America, and British India.

The question was brought up of the difficulties and expense which the requirement might cause navigation in consecutive ports having different requirements as to the form or dimensions of rat guards, and it has been asked whether the actual efficacy of the measure justified such a requirement. The opinion of the committee on this point has not been modified up to the present time. The committee states that screen rat guards have no value unless they are properly constructed and certain specific conditions are observed relative to their application. In practice the strict observance of these conditions presents so many difficulties that one can not formally recommend the use of rat guards unless there exists a real danger of the introduction of rat plague, justifying the necessity of taking all possible measures for preventing the passage of rats.

In so far as concerns the type of rat guards, it does not for the moment seem possible to recommend the adoption of a uniform "standard" model. One may accept either the model in the form of a disk or the model in the form of a cone, with the following essential characteristics: Diameter of at least 0.9 meter for the disk or 0.6 meter for the cone; construction preferably to be of a single piece of galvanized iron at least 0.002 meter in thickness; a single opening for the mooring cable and furnished with some means of obtaining a tight closing around it. Constant surveillance is necessary, whatever method is employed, to assure the keeping in place of the screen (position perpendicular to the mooring, without slipping).

A model of electric rat guard tried in British India was described. The report of the researches of Major Taylor and Doctor Chitre will be published in the Bulletin of the Office. They will show that this model has given, in the course of laboratory experiments,

excellent results with an alternating current of 230 volts. Ships use generally only 120 volts direct current; but this difficulty can be solved by the use of an interrupter and a suitable small transformer, giving a current without danger in case of accidental human contact while preventing the passage of rats.

Furthermore, since the passage of rats takes place almost exclusively at night, trials could be made of the efficacy of semispherical screens with a reflecting inner surface placed across the moorings and with an electric bulb lighted in the center. The committee decided to send to the sanitary administrations of several countries a suggestion that these night experiments be tried, under practical conditions, as concerns electric rat guards and the use of dazzling light.

Naturally, the application of rat guards does not dispense with the simultaneous use of other measures, such as the whitewashing and lighting of the gangplanks, tarring of the moorings, etc. All these measures, however, although not negligible, are accessory because of the possibilities of the passage of rats between ships and land by other routes and the fundamental measure of defense against rat plague is always ratproofing.

6. The office has received from Surgeon General Cumming, Director of the Pan American Sanitary Bureau, information for the International Sanitary Maritime Annual. The committee has insisted that the countries which have not yet sent the necessary information concerning themselves for the Annual should do this as soon as possible. The first edition, issued according to the information of the committee in its preceding session, August, 1929, is exhausted; a second edition, brought up to date, should appear toward the end of the present year. There will be included here information on the different points in which interest was reported by the delegates.

7. One of the most important matters which the committee considered was that of the sanitary control of air navigation.

Already, in different countries which fear the importation of disease by the air route, regulations, sometimes particularly rigorous, have been established. While taking full account of the motives which have inspired the authorities responsible for the public health in these countries, the committee has considered that the very fact that the authorities have thought it necessary to act renders it more necessary that studies be undertaken without delay by the International Office of Public Hygiene with a view to specifying more clearly the measures of sanitary defense which may be justified in one circumstance or another.

It decided to form for these studies a special commission on air navigation, composed of a limited number of its members and able to appeal to the meeting of the International Commission on Air

Navigation. This special commission should present at the next session of the committee of the International Office of Public Hygiene a report on the results of its work.

The committee realizes that, under the present conditions, likely to change from day to day, it would be premature to fix regulations or even intangible principles and that the provisions adopted, whatever they may be, will necessarily be, at the beginning, subject to more or less profound revisions. However, it did not think that anything had arisen since its session of last May of such a nature as to alter the point of view set forth at that time. It stressed again the danger which lies in too closely assimilating the regulations of sanitary defense pertaining to air traffic and those pertaining to maritime navigation; and it continues to hold that the risks of spread of disease by airplane are relatively small, because of the class of passengers and the conditions of the landing ports, very different from those of maritime ports.

It has decided, consequently, that the office, in advising the Governments and the organizations interested of the provisions adopted for the immediate study of the question of the international sanitary regulation of air navigation, should call to their attention the principles adopted by the committee in its session of last May, that is, (a) fixed landing ports, (b) medical visit on arrival, (c) sanitary "surveillance"⁵ of persons coming from infected zones, and (d) in special and exceptional cases rendering this measure necessary, strict isolation during stay.

To these principles there must be added, however, two others:

1. The buildings, the occupants, and, in general, all the territory of the airport should be kept in an absolutely satisfactory condition from a sanitary point of view, and all the necessary precautions should be taken here as regards infectious diseases. These precautions, in the yellow fever zones, should include sheltering from mosquitoes—mosquito proofing—and measures for the destruction of mosquitoes.

2. Wherever the necessity is felt, special arrangements should be made to organize communication between airport doctors situated on the same routes regarding infectious diseases.

It should be insisted upon that these different recommendations do not include the institution of a system of bills of health for use in air navigation, nor do they provide the "observation"⁶ of the passengers.

The office will be at the disposal of Governments and international organizations—commissions or conferences—occupied with air navigation to advise them on the subject of sanitary control of this traffic.

8. In execution of article 151 of the convention, the International

⁵ In the sense of the International Sanitary Convention of 1926 (preliminary provisions).

⁶ In the sense of the International Sanitary Convention of 1926 (preliminary provisions).

Office of Public Hygiene has received from the Sanitary Maritime and Quarantine Board of Egypt the report on the Pilgrimage of Hedjaz of 1929.

This report was examined by the special commission on pilgrimage formed in October, 1928, then by the committee in plenary assembly. Taking into account the necessary complexity of the system of international control established in regard to pilgrimage, one may, if he takes a general point of view, be satisfied with the measures which, according to this system, have been taken in different ways and by different authorities for the prevention of infections.

All this evidence agrees in showing the advantages which result from the information gathered and transmitted by the regional bureau at Alexandria.

Moreover, the measures taken by the quarantine station of Tor have rendered obvious services; several times the station discovered that the conditions of ships bearing pilgrims left much to be desired, and the quarantine board immediately took suitable action.

The reciprocal agreement concluded at Beirut at the beginning of 1929, at the suggestion of the International Office of Public Hygiene, has shown itself extremely useful to the administrations concerned with the pilgrimage, especially in Syria, Iraq, Palestine, and Transjordania. The committee thinks that in continuing this practice of holding conferences of the representatives of the above-mentioned administrations there will be every chance for the sanitary surveillance of the pilgrims to be carried on in a manner easier for the administrations and less troublesome to the pilgrims themselves. The office should make recommendations in this direction when it thinks that there are a sufficient number of questions of detail to be regulated locally among the different national administrations interested.

The measures adopted or considered by the Persian Government in view of participating in the sanitary protection of pilgrimage have been reported to the committee. An organization specially formed in the Sudan gave good results for pilgrims crossing the Red Sea. An agreement was made with the Italian authorities of Eritrea (suppression of transportation by dhows and similar boats). As to the pilgrimage from the south, the measures for the protection of pilgrims were the object of a special investigation in British India; the station of Kamaran functioned in a satisfactory manner, and the system established by the Anglo-Indian-Dutch agreement of 1926⁷ proved efficacious.

The committee was concerned with the question of whether, from a purely technical point of view, it is desirable to encourage the pilgrims coming from the north (coast of Africa or Levant) to travel in numerous small groups. The committee thinks, on the contrary,

⁷ See Bulletin of the International Office of Public Hygiene, Vol. XIX, 1927, p. 145.

that the prevention of diseases and medical surveillance, as well as the welfare of the pilgrims, would be better assured by a good organization of transportation en masse on board well-equipped ships conforming in every way to the stipulations of the International Sanitary Convention of 1926 concerning pilgrim ships.

It has, besides, from an exclusively technical point of view, given an unfavorable opinion concerning the transportation of pilgrims from the north to Djeddah by alternate land and sea routes, these pilgrims being conducted (by ships well enough equipped to be used as pilgrim ships) to Port Said, landed en masse, and directed across Egypt to Suez, there to go by sea to their destination of Hedjaz. Such a method, independently of the administrative difficulties which it entails, would present serious risks from a sanitary point of view.

Finally, without altering the principles voiced in the preceding session concerning passports for pilgrimage, the committee took into consideration the suggestion of agreements being made between countries having similar conditions for the adoption of a uniform model of pass. A model of this kind was presented to it by the president of the Sanitary Maritime and Quarantine Board of Egypt and will be submitted to preliminary examination by the sanitary administrations interested.

II

The study of recent manifestations of plague has brought forth several new ideas regarding the epidemiology of the disease and the clinical evolution of certain of its forms. The Russian mission sent to Transbaikalia in 1929 showed that the tarabagan could remain a carrier of the plague bacillus for a long time without showing any sign of disease. During the epidemic which prevailed in inner Mongolia in the summer of 1928, in 378 cases of plague 118 cases were found to be septicemic, without buboes, without signs of pneumonic plague, and with presence of plague bacilli in the blood. To clear up the origin of this epidemic, there were captured, classed, and examined 50,000 rodents, of which there were about 40,000 rats of different species and 6,850 spermophiles, of which the most frequent was *Citellus mongolicus umbratus*; this is the spermophile which is in this country the reservoir of the plague virus. In Madagascar it has been observed that the pulmonary form was more frequent in regions where the minimum temperature fell below 14° and that it was very rare in those where the minimum was above 16°. It is known, however, that in other countries pulmonary plague may appear in summer and that it manifests itself sometimes in tropical regions.

Antiplague vaccination was definitely successful in the epidemic of Aden in 1928; 68 per cent. of the population, which consists of about 44,800 persons, were vaccinated. The percentages of morbidity were

0.28 in those vaccinated and 10.16 in those not vaccinated; there was little difference in the mortality rates, which were, respectively, 59.3 and 75.7 per cent. In Egypt, where vaccination is carried on in the attacked villages with a strict control which permits hardly a person to escape vaccination, its great value is recognized. The mortality rate in 1928 was 34 per cent, while it was on an average of 59 per cent in the years preceding vaccination. At Morocco during the epidemic which prevailed in the territory of Agadir in the spring of 1929 persons in the contaminated villages or douars were vaccinated (8,670 persons); 327 cases occurred before vaccination, 30 after. In a certain number of douars there was no case after vaccination; but the abrupt arrest of the epidemic was also reported in certain douars which were not vaccinated. The mortality was not reduced by vaccination, contrary to what happened in Egypt. The use of antiplague vaccination is considered successful in Algeria, in French West Africa, where the lipo-vaccine (one injection with a large dose of bacilli) has perfectly protected the troops, and in the Canary Islands, where 28,000 vaccinations were made from 1926 to 1928 at Las Palmas and at Santa Cruz de Tenerife at the time of small epidemics, which did not develop further.

Yellow fever has not been reported in British West Africa since the occurrence of 5 cases at Bathurst (Gambia) at the end of 1928. In the French colonies 3 cases were reported in 1928 on the Ivory Coast and 3 in Dahomey. These last cases were in three Europeans attacked at the same time in a place where no source of virus was known. There is to be noted one case in which the incubation period seems to have been reduced to 48 hours. In Brazil the vague epidemic of 1929 comprised 646 cases, the last case occurring in September. At the beginning of the actual recrudescence of yellow fever, before the first case officially reported May 31, 1928, several scattered cases in three quarters of Rio de Janeiro had been unrecognized. The disease found favorable ground in the city, because of the fact that two-thirds of the population certainly had no immunity, either from former endemicity or created by prolonged stay in a warm country. The stegomian index attained 22 per cent. Fortunately the epidemic broke out at a time (June) when the multiplication of mosquitoes was on the decline. Prophylaxis was organized with great energy and admirable completeness. A veritable army of about 7,000 larva and mosquito hunters was put into service thoroughly instructed in the customs of *Stegomia* and divided by districts under the control of doctors. The adult mosquitoes were destroyed especially by a method of general action, the spraying of a liquid with a kerosene base, in dense clouds, with the aid of large pneumatic painting apparatus. The pools of water were systematically destroyed, especially in hollows of trees; the water was replaced by damp sand in cemetery flower pots; in

the suburban districts three kinds of small larva-eating fish were generously distributed. The destruction of the *Aëdes aegypti* and their larvæ may now be considered as complete. Another very active campaign of mosquito destruction, the details of which were reported to the committee, was carried on in the Belgian Congo in the region of Matadi after the epidemic of yellow fever in 1928. New observations were made that the eggs of the *Aëdes aegypti* might, after a long period of drought, hatch suddenly on the occasion of a rain (Roubaud); consequently in the future the eggs must be killed in the dry shelters either by cresol or disinfection with a sulphur lamp.

The laboratory researches carried on by Hindle in England have shown that the virus of yellow fever, perfectly dry, keeps three to four months; that vaccines prepared according to different techniques generally protect the monkey against the trial inoculation of a fatal dose of the virus. At Amsterdam, Snyders and Dinger, experimenting with mosquito (*Aëdes aegypti* and *Aëdes albopictus*) larvæ from eggs sent from Java, have succeeded in transmitting yellow fever to the *Macacus rhesus* and with more difficulty to the *M. cynomolgus*. The possibility of the transmission of the disease by species of mosquitoes which are very abundant in the Far East has now been established. In the course of these researches two laboratory infections occurred in England and one at Amsterdam; still others were caused in Europe by the virus brought from Africa; but all were of a benign character. Nevertheless, the danger of the importation of yellow fever into regions free up until now, and where *Stegomia* exist, should not be lost sight of. The Government of the Netherlands Indies is going to take measures to protect that country.

The yellow fever commission, formed in the committee of the International Office of Public Hygiene, believing that the new information acquired on the virus and on the epidemiology of yellow fever might motivate certain modifications of the conclusions formulated by the Third Epidemiologic Subcommission (yellow fever) of the International Sanitary Convention of 1926, has made an examination of these conclusions, and has submitted for the approval of the committee a new wording of the fundamental ideas which should serve as a basis for the international prophylaxis of yellow fever. The most important change is the fixing at three days instead of five days from the beginning of the disease the period during which the patient may infect mosquitoes. It has been recalled, besides, that the larval shelters of *Aëdes aegypti* are always found in the immediate neighborhood of houses and that the adult mosquitoes very rarely leave the spot where they were born. The commission has also drawn attention to the danger of the spread of yellow fever which might arise from laboratory researches carried on in uninfected countries where *Stegomia* exist. The proposals of the yellow fever commission have

been adopted by the committee. When they will have been examined again by the interested countries, the commission proposes to study the suitability of adapting certain articles of the International Sanitary Convention of 1926 to the new ideas.

The epidemic of smallpox which broke out toward the end of July in the Netherlands, although imported from the Netherlands Indies, where smallpox with high mortality is the prevailing form (20 to 30 per 100), has been in the majority of cases of benign type, even in unvaccinated small children—pustules which seem not to penetrate the dermis and heal most often without scars, excellent general condition from the beginning of the eruption, no fever of suppuration. But beside these cases, which recall alastrim, there are severe cases impossible to distinguish from classic smallpox. The mortality at Rotterdam in 317 cases was 5.6 per 100. The deaths occurred most often in patients who showed petechiae among the pustules. Vaccination was largely carried on in the epidemic foci (more than 1,200,000); the present diminution in the number of cases gives the impression that the epidemic is checked. Since the regulations in force in the Netherlands impose, in the case of smallpox, very strict measures (isolation of contacts), it seemed suitable to the sanitary authorities to distinguish between the serious cases (*variola major*) and the benign cases (*variola minor*), the medical inspector having the power, in case of the second, either to apply or to mitigate the measures. The committee has not issued an opinion on the question, but the opinion has been expressed that, if the distinction between the two types of smallpox may be scientifically legitimate and even be imposed in practice during the course of certain epidemics, it will be dangerous to take it into account in the presence of isolated cases or at the beginning of an epidemic.

In Great Britain about a hundred benign cases per week continue to be reported. The surveillance of contacts is strictly maintained, and those who leave England for another country are reported to the country of destination. An attempt is being made to diminish the unpopularity in certain sections of antivariolic vaccination by reducing the dose of vaccine and the number of injections.

The vaccination campaign in the Netherlands has resulted in a rather large number of cases of post-vaccinal encephalitis (68 from January 1 to October 10, of which 14 were in persons revaccinated). In Great Britain, from October 1, 1927, to the end of September, 1929, the number was between 75 and 77; in Germany, during the last three years, 51 with 22 deaths (5 in persons revaccinated, all fatal). In Sweden 13 cases have been ascertained, after critical examination, from 1924 to 1928, and 3 in 1929 (proportion 1 : 15,000). Two of these last were fatal, one after 24 hours of sickness; there were found in sections of the brain of these two cases ovoid or rounded corpuscles

containing masses of chromatin strongly colored by the Giemsa method, which are considered to be infusoria (Kling, Lonberg, and Wassen).

The commission which the committee of the office charged, at the time of the last session, with studying the questions relating to smallpox and antismallpox vaccination has begun to collect information on the regulations in force in different countries in regard to persons and their households attacked by smallpox, on the provisions concerning vaccination and on the actual situation of the population on the question of vaccination, and on the preparation and control of vaccinal lymphs. The information sent by Germany, Bulgaria, Spain, Great Britain, Japan, Mexico, Norway, Sweden, Yugoslavia, and the Union of Socialist Soviet Republics will be collected and published in a supplement to the monthly bulletin of the office.

In addition, the commission on smallpox and vaccination is charged with the collecting of as much information as possible in order to present to the sessions of the committee, reports on—

1. The frequency in different countries, the conditions of appearance, the etiology, and the prophylaxis of post-vaccinal encephalitis.
2. The influence on the local and general reactions, the changes in blood and organs, and as much as possible the degree of immunization obtained: (a) By processes of injection reducing to a minimum the rupture of the tissues; (b) by small doses of vaccine; (c) by the dilution of the lymph; and (d) by the decrease in the intervals between successive vaccinations.

3. The use of killed virus.

The committee appeals to the collaboration of all the delegates to aid in its task by sending what information they may gather in their respective countries.

The vaccination of infants in the native population of Dakar (French West Africa), against tuberculosis by the B. C. G. resulted in a decrease in the general infant mortality rate from 24 to 14 per 100. This result aroused the French minister of the colonies to prescribe this vaccination in all the colonial regions where tuberculosis is frequent. In Rumania the number of infants vaccinated has now reached 40,000; the general infant mortality, which was very high, has fallen to half and in some sections to a quarter of the former rate; the infant mortality from tuberculosis in infected environments has been reduced to rates of 1.4 to 2.3 per 100. It is known that the diagnosis of tuberculosis is often difficult in very small children; in Denmark it was reported that this was largely facilitated by the systematic examination of the washings from the stomach. The presence of the tubercle bacillus in the stomachs of small children brings up the problem of their isolation in special hospital rooms or in special sanatoria for tuberculous children. A very careful study

made in Belgium on the effects of the inoculation of the B. C. G. in pregnant women has brought new proofs of the harmlessness of this bacillus.

The committee of the office decided in its session of May, 1929, to collect information on the struggle against tuberculosis in the industrial sections of different countries. The replies received from Germany, Great Britain, and Norway agree in stating that in these countries sickness insurance procures for the workers in industry attacked by tuberculosis medical care, sojourn in a sanatorium or hospital, aid during unemployment or assistance to their families, in conditions which render superfluous an appeal to the private initiative of captains of industry. This is exercised, however, in certain large establishments in Germany and Great Britain. The question which has not yet received adequate solution is that of the return to work of the tuberculous persons, cured or with the disease arrested; the institutions which have as a goal assuring the employment of this class of former sick persons should be developed or increased, such as committees for the assistance of recovered persons in England, colonies of the type of Papworth in England and the invalid-insurance fund of Breslau in Germany, the sanatorium for the resumption of work at Amsterdam, the sanatorium factory of Leysin in Switzerland, the employment bureau for tuberculous persons of the league against tuberculosis of Zurich, and the "half-time bureau" recently inaugurated at Bordeaux and Nancy, France. The problem is in other respects more general and can be considered in its entirety by the committee. It is largely what is being done and what can be done to assure resources through labor to tuberculous persons who do not need to be placed in a hospitalizing institution.

Undulant fever caused by the Bang bacillus produces at present about 500 cases per year in Denmark; the morbidity is from 2 to 3 per 100. It was noted that among eight women attacked during pregnancy, seven had abortions. Is the Bang bacillus a more frequent cause of abortion than is thought? Inquiries have shown that 60 per cent of the patients are infected directly from cattle and 40 per cent only through milk. This is a low infection rate, since a third or a quarter of the milk consumed at Copenhagen contains the bacillus of abortion of cattle. The relative frequency of undulant fever in Denmark should be attributed to the custom of consuming raw milk. The Danish strain of Bang bacillus is not more virulent than the Swedish strain; they are biologically different from the *Micrococcus melitensis* and the *Bacillus abortus* of pigs. In Great Britain 6 per cent of the milk contains the Bang bacillus; however the cases of known native origin number only 6 or 7. The milk, however, is generally pasteurized. In Sweden there continue to be reported 2 or 3 cases per week, more or less grouped in foci; direct contact with cattle is

rarely blamed. In Switzerland, where the population is opposed to the pasteurization of milk, the disease seems to be more frequent than is thought, especially in the cantons of Vaud and Zurich. In the United States the *B. abortus* of pigs is considered more pathogenic than that of the cow, to which, however, several cases of undulant fever are attributed. In Algeria, in the vicinity of Oran, the organization of a large creamery in which all the goat milk will be pasteurized has as its aim the elimination of undulant fever.

Some very scattered cases of poliomyelitis, constituting an epidemic menace, were reported in Belgium during the summer of 1929. In the Netherlands the number of cases reported (209 in nine months) is about four times the number of former years. In Germany the year 1927 marked a maximum (2,732 cases); for 1928 and 1929 the figure decreased by about a thousand. In Switzerland the disease, which was entirely sporadic (about 100 cases per year), has taken on more the character of an epidemic since 1927. In 1928, 28 cases were noted in a group of two or three villages in the canton of Freiburg. The intestinal forms, little known to doctors, are not reported. In Rumania the years 1927, 1928, and 1929 have each presented a slight epidemic, with the beginning in April and the maximum in August-September; the number of cases was, respectively, 2,196, 416, and 51. Especially at the time of the first epidemic diffusion by radiation from a center (Bucharest) was clearly reported, and in many cases the propagation from house to house or the importation of the contagion into a healthy environment by a known person. Interhuman contagion has, then, been the most frequent method of transmission. The epidemic prevailing in a locality leaves after it a general immunity in the population. It is thus that in 1,005 communes attacked only 92 were struck in two different years. In Sweden the number of cases to the first of October, 1929 was 429; an attempt at prophylaxis by the chlorination of drinking water is being made, based on the theory of the hydrous origin of the infection. In Great Britain researches have been carried on with a view to ascertaining the possibility of the passage, from the nasal passages to the cerebral centers, of infections such as poliomyelitis, lethargic encephalitis, and cerebrospinal meningitis. It has been proved that in the rabbit substances such as very fine bits of charcoal, Prussian blue, introduced into the nasal passages, with no traumatism, pass rapidly into the brain.

It is useful to give periodically, at intervals of a few years, a survey of the situation in the different countries with regard to the venereal diseases, especially syphilis. In Great Britain, with the same methods of calculation which led to the estimation toward the beginning of the present century of 50,000 per year, the number of new cases of syphilis reaches at present only a figure of about 7,000; the deaths of children under 1 year attributed to syphilis reached, in 1917, a

rate of 2.03 per 1,000 births in England and Wales; this rate is at present no more than 0.71. In Germany an investigation disclosed that, in 1919, the average rate of new cases of venereal diseases was 87 per 10,000 inhabitants; in 1927, according to a similar investigation, this average had decreased to 58, of which 43.6 is for gonorrhea and 13.1 for the different forms of syphilis seen for the first time by a physician. The law of the Empire of February 18, 1927, aims to improve still more the condition by instituting compulsory declaration to a sanitary authority and compulsory prolonged treatment, free of cost when gratuity is justified. In Italy the decrease in syphilis is considerable; the mortality from syphilis of children less than one year, for example, fell in 1926 to a quarter of what it was in 1917. The treatment is in principle free and anonymous. An important factor in the decrease of the venereal diseases is the governmental institution, the "Dopo lavoro," with all the material advantages and the healthy distractions which it offers to manual laborers and intellectuals. In the method employed in Belgium, which consists in greatly facilitating the treatment and in issuing the medicines free from clinics and dispensaries, produced very rapid results; but since three years ago the situation has remained stationary. A new method of progress is going to be tried, which consists in the issuance of free medicines to all the patients who apply, outside dispensaries and clinics, to doctors having taken special instruction in syphilography. In Denmark the reduction in syphilis has been continuous since the law of 1906. The fact that all the serological examinations are carried on in the State Serotherapeutic Institute permits a complete census of syphilitics to date; the number is at present about 1 per 100 of population. In Switzerland there has also been a decrease in syphilis. An investigation is going to be made and will be compared with that which, 10 years ago, gave a rate of 1 to 2 per 100. In the Netherlands the only certain statistics concern the marine. That which comprises, for example, the European sailors in the Netherlands Indies shows during the course of the last few years a decrease from 1.2 to 0.4 per 100; the figures 15 years ago were much higher. In the United States, recent very careful studies to which more than 20,000 doctors contributed, fixed at 1.49 per 1,000 inhabitants the number of cases of primary syphilis under treatment, and at 4.24 per 1,000 the total number of cases being treated. Another estimate, the basis of which is less sound, puts the number of new cases per year at 3.46 per 1,000. Syphilis is much more frequent among the black population than among the white. Luxemburg is the only country in which a recent increase in syphilis has been reported to the committee.

As to gonorrhea, it decreased by a third in Germany between 1919 and 1927, according to the comparison of the number of patients which have consulted a doctor for the first time in those years. In

Great Britain, one can only say that it is not increasing. In Switzerland the situation seems to be stationary.

A great effort for the organization of the struggle against the venereal diseases has been made in France, where the amount of the State budget for this purpose in 1929 reached the sum of 11,000,000 francs, and the number of consultations in dispensaries and special services 2,200,000; in the Union of Socialist Soviet Republics, which has 427 dispensaries and has made treatment compulsory by law; in Turkey, where treatment is compulsory and is assured by the combined action of the Government (which grants an amount of 3,000,000 francs), the departments, and the municipalities; in Yugoslavia, which requires the creation of centers for treatment and prophylaxis, respectively, in communes of 10,000 and 20,000 inhabitants; in Bulgaria; in Egypt, whose 14 dispensaries and special hospital services are frequented by an enormous number of persons; in Algeria, where, under the direction of the Algerian Office of Preventive Hygiene, 200 centers are operating, where medicines are furnished free by the French antivenereal service; in Morocco, where all the sanitary organizations, besides the seven large dispensaries, carry on antivenereal propaganda and attract an extremely interested clientele, particularly women who hope by treatment to combat sterility.

Norway, since the law of May 31, 1918, and Germany, since that of 1927, with slightly different conditions, do not authorize the marriage of persons with venereal diseases unless the danger of contagion has been removed, or at least unless the other party to the marriage knows of the disease and the two parties are instructed in the dangers that menace them. In Yugoslavia a person who has been treated can not marry without presenting a certificate of cure, and any person who has contaminated another during the course of the treatment falls under the power of penal law. This last provision also exists in Turkey. In Egypt the contracting parties should, before marriage, furnish a written and signed declaration that they are free from venereal diseases.

A commission formed in Italy, presided over by the President of the International Institute of Agriculture at Rome and which has as a mission the bringing about of the collaboration of this institution with the International Office of Public Hygiene in the study of the comparative mortality of cities and rural sections, has made a critical examination of the methods of procedure which it would recommend in making this study. To the comparison, made following a well-decided plan, of several urban and rural districts suitably chosen, it suggests adding a monograph describing the climatic, demographic, economic, and sanitary conditions of these districts. In England statistics exist which group, on the one hand, the urban

districts (towns, counties), and, on the other, the rural districts. But the intervention of many factors makes difficult the interpretation of such total statistics. Thus the cities of the south of England have a lower mortality rate than the rural districts of the north, although the mortality for the whole country is higher in the urban districts than in the rural districts.

The information gathered by the office on the number and territorial distribution of hospitals in the different countries was augmented by an important contribution from the Union of Socialist Soviet Republics and by complementary information on Germany.

Notes have been sent to the office on assistance for mothers before and after confinement under sickness insurance in Germany and under the protection of the mother and child through numerous communal and intercommunal institutions of which a census is in progress; on the professional education of visiting nurses in France and the extent of their activities; on the legislation, organization, and functioning of the protection of maternity and early infancy in France.

The desire to create an efficient control of the consumption of narcotics under the application of the Convention of Geneva in 1925 has led to the organization in Spain of the importation of narcotics by the State and their distribution according to the strict needs of patients. The cultivation of opium, which produced about 50,000 pounds per year, has been suppressed in Egypt, after ascertaining that the exportation of the commodity was nil.

The disease, provisionally called "Marseilles exanthematic fever" and which presents an interest from the point of view of international sanitary conventions because of the possible confusion with typhus exanthematicus, appeared during the summer of 1929 with several cases in Madrid and two cases in Lisbon, for the first time leaving the Mediterranean basin where it was discovered (Provence, Italy, Tunis). Characterized by a spotted papular eruption, attacking the face, often accompanied by arthralgia, it presents as particularly striking the existence of a small grayish vesicle, finally leaving a black scab, often on the lower limbs, which may be the trace of the bite of the insect or the larva of the insect transmitting the disease. This disease is similar to Japanese fluvial fever—Tsutsuganomushi—endemic in the Provinces where field laborers work along long rivers and are bitten by an acarid, the *Akamushi*. The reports of these two diseases and those of similar eruptive fevers in the Netherlands Indies and Malaysia have not been made with precision and warrant study.

The origin of several epidemics in Denmark has been attributed to milk during the last two years—one of streptococic angina, which comprised 150 cases, 2 due to paratyenteric bacilli, with 150 and 200 cases, and 2 of paratyphoid. One of these last, at Odense, attacked

200 persons and followed exactly the course of milk coming from a farm where an employee had had a light case of paratyphoid. The Danish law prohibits any person ill or a carrier of bacilli to work with milk and provides indemnities for lack of earning power.

The detailed study of the fermentation of sugars, especially of xylose with different stocks of typhous bacilli isolated in Yugoslavia has permitted distinction of types among the stocks and the determination of geographic distribution. Perhaps account will be taken of these characteristics in the preparation of antityphus vaccines.

Sleeping sickness is not widespread in French West Africa; the regions favorable to the existence of *Glossina* are rather rare. In the South and the center of the upper Volta there is a section which is slightly infected. The principal focus is at Togo, in the region bordering Dahomey. An investigation which reached 28,000 persons (half of the population) showed in the focus of Dahomey a proportion of 4.3 per 100 persons attacked.

Among the infectious diseases of childhood, diphtheria alone has decreased in Switzerland; measles increases periodically every three to five years. Mortality, on the other hand, is decreasing for these diseases; diphtheria is more serious than measles; scarlatina is almost never fatal. In Egypt the mortality from measles sometimes reaches 50 per cent; there is a tendency to pay no attention to the disease until complications have set in.

The contagious diseases present seasonal variations, which are observed regularly in certain groups of countries; thus it is that scarlatina, diphtheria, common angina, and acute rheumatism have their maximum in January and their minimum in July; for bronchopneumonia and tuberculosis the maximum is in February, the minimum in August; for cerebrospinal meningitis the maximum is in May and the minimum in autumn; for poliomyelitis, the typhoid and paratyphoid fevers, and infantile diarrhea the maximum is in August or September; measles and whooping cough appear in irregular waves. As to the causes of these variations it may be noted that the richness of the blood in hemoglobin is at its minimum in January and maximum in July, that respiration is more ample and less frequent in summer, a phenomenon on which light should have an influence and which would contribute in giving its own characteristic to the curve of respiratory diseases. Other factors, difficult to ascertain, probably intervene.

Communications have also been presented to the committee on the following: The epidemic of smallpox at Aden in 1929, which an intense vaccination campaign checked after two months; the characteristics of variolic rash and its early localization on the external side of the arm, when vaccination has been done before; the studies made at the hospital of infectious diseases of the Kwantung Govern-

ment at Dairen on the toxins of the scarlatina streptococcus and the rôle of the streptococcus as causal agent in scarlatina; the discovery in Yugoslavia of young forms of gametes in afebrile forms of tropical fever; the properties of the rabic virus and the mechanism of immunization against rabies; the operation of the antirabic services in French West Africa, the island of Madagascar (country where no death has been reported), and in Indo-China (10 deaths in the course of treating 1,905 cases); the organization of the hygienic service in Mexico (child hygiene centers, industrial hygiene service and social aid, antituberculosis organization, campaign against alcoholism, leper census, cancer, commissions to study the "mal del Pinto" and onchoceriasis, and for the campaign against these diseases); legislation concerning tuberculosis and the venereal diseases in Bulgaria; experiments in the destruction of rats and insects by cyanogen chloride carried on in the port of Valencia (Spain); the destruction of parasites by chloropicrine by means of an arrangement which permits disinfection of a place from outside and without a mask; regulation of the use of antiseptics and coloring matter in foodstuffs in Germany and Spain.

COURT DECISION RELATING TO PUBLIC HEALTH

Injunction restraining enforcement of milk law denied.—(United States District Court, S. D. Florida; *Noble v. Carlton, Governor of Florida et al.*, 36 F. (2d) 967; decided Jan. 4, 1930.) Chapter 13696 of the 1929 laws of Florida regulated the sale of milk and cream. The plaintiff, a citizen of Georgia, sought to declare certain provisions of the act unconstitutional, and asked that the defendants, certain State and local officials of Florida, be restrained from enforcing the act or any regulations promulgated thereunder. The case was heard by a court of three judges upon a prayer for an interlocutory injunction. By the court's decision an injunction was denied, the points passed on being as follows:

(a) The exemption from the act's provisions of milk producers in Florida who produced milk from five cows or less and disposed of such milk, by sale or otherwise, in the county where the milk was produced, was not unreasonable and did not deprive plaintiff of the equal protection of the law in violation of the fourteenth amendment to the Federal Constitution.

(b) As that portion of the act making it unlawful for any person, firm, association, or corporation, except the initial producer doing business in Florida, to receive, offer for sale, transport, prepare or deliver for transportation or sale, as milk processors or dealers, any milk or cream without first obtaining a State license as a dealer, was construed by enforcement officials as not requiring of plaintiff

a license to bring his milk into Florida, no harm could come to him and he was not, therefore, in a position to complain of this provision.

(c) The requirement in the act that milk be labeled to show the place of production was not violative of the fourteenth amendment to the United States Constitution, as this requirement was general and applied to milk produced in Florida as well as in other States.

(d) The penalties, a fine of not more than \$5,000 or imprisonment in the county jail for not more than 12 months, were not excessive.

DEATHS DURING WEEK ENDED MARCH 8, 1930

Summary of information received by telegraph from industrial insurance companies for the week ended March 8, 1930, and corresponding week of 1929. (From the Weekly Health Index, March 13, 1930, issued by the Bureau of the Census, Department of Commerce)

	Week ended Mar. 8, 1930	Corresponding week, 1929
Policies in force-----	75,538,052	73,509,710
Number of death claims-----	16,292	16,767
Death claims per 1,000 policies in force, annual rate-----	11.2	11.9

Deaths from all causes in certain large cities of the United States during the week ended March 8, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index, March 13, 1930, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Mar. 8, 1930		Deaths under 1 year		Infant mortality rate, week ended Mar. 8, 1930 ¹
	Total deaths	Death rate ¹	Week ended Mar. 8 1930	Corre- sponding week, 1929	
Total 64 cities-----	7,711	13.8	14.6	727	858
Akron-----	45			7	8
Albany ⁴ -----	38	16.5	17.8	3	3
Atlanta-----	95	19.4	18.4	11	17
White-----	44			6	7
Colored-----	51	(*)	(*)	5	10
Baltimore ⁴ -----	275	17.3	17.3	21	21
White-----	214			12	16
Colored-----	61	(*)	(*)	9	5
Birmingham-----	67	15.7	19.5	8	11
White-----	34			4	3
Colored-----	33	(*)	(*)	4	8
Boston-----	230	15.0	16.2	28	22
Bridgeport-----	44			8	4
Buffalo-----	158	14.8	15.4	15	19
Cambridge-----	33	13.7	14.9	4	4
Camden-----	33	12.7	15.8	3	8
Canton-----	19	8.5	13.8	3	3
Chicago ⁴ -----	767	12.7	13.3	71	109
Cincinnati-----	147			15	17
Cleveland-----	232	12.0	11.9	28	28
Columbus-----	84	14.6	12.0	3	5
Dallas-----	52	12.4	10.8	7	6
White-----	43			7	5
Colored-----	9	(*)	(*)	0	1
Dayton-----	29	8.2	12.2	2	6
Denver-----	98	17.4	17.7	6	9
Des Moines-----	42	14.4	6.9	1	4
Detroit-----	245	9.3	14.0	48	65
Duluth-----	22	9.8	9.4	1	3
El Paso-----	36	15.9	23.0	6	10

Footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended March 8, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929—Continued.

City	Week ended Mar. 8, 1930		Annual death rate per 1,000, corresponding week, 1929	Deaths under 1 year		Infant mortality rate, week ended Mar. 8, 1930
	Total deaths	Death rate		Week ended Mar. 8, 1930	Corresponding week, 1929	
Erie	26			4	2	85
Fall River ⁴	31	12.0	12.4	1	3	23
Flint	37	13.0	11.2	6	8	70
Fort Worth	35	10.7	15.8	2	7	
White	26			1	5	
Colored	9	(*)	(*)	1	2	
Grand Rapids	45	14.8	7.0	6	2	91
Houston	70			10	9	
White	44			8	9	
Colored	26	(*)	(*)	2	0	
Indianapolis	113	15.4	15.7	9	12	67
White	94			9	10	78
Colored	19	(*)	(*)	0	2	0
Jersey City	76	12.2	12.3	7	3	61
Kansas City, Kans.	23	10.1	7.1	0	0	0
White	20			0	0	0
Colored	3	(*)	(*)	0	0	0
Kansas City, Mo.	106	14.1	16.0	14	10	109
Knoxville	30	14.8	10.4	2	8	47
White	22			1	7	26
Colored	8	(*)	(*)	1	1	247
Los Angeles	271			20	26	61
Louisville	78	12.8	13.9	4	7	35
White	55			3	5	30
Colored	23	(*)	(*)	1	2	72
Lowell	32			5	6	119
Lynn	24	11.9	11.9	0	1	0
Memphis	100	27.4	23.0	5	14	60
White	43			1	3	18
Colored	57	(*)	(*)	4	11	135
Milwaukee	132	12.6	13.7	18	24	91
Minneapolis	104	11.9	13.4	6	11	39
Nashville	51	19.0	17.9	7	5	108
White	35			4	1	82
Colored	16	(*)	(*)	3	4	190
New Bedford	27			2	7	51
New Haven	45	12.5	15.0	1	4	19
New Orleans	182	22.1	21.4	12	17	75
White	113			4	6	30
Colored	69	(*)	(*)	8	11	135
New York	1,610	14.0	15.1	165	164	69
Bronx Borough	213	11.7	13.4	15	14	35
Brooklyn Borough	532	12.0	12.7	70	76	74
Manhattan Borough	655	19.5	20.9	63	54	103
Queens Borough	167	10.2	10.6	14	14	41
Richmond Borough	43	14.9	18.7	3	6	56
Newark, N. J.	116	12.8	14.3	8	14	42
Oakland	70	13.3	15.2	3	7	36
Oklahoma City	37			5	3	98
Omaha	60	14.0	17.6	3	7	34
Paterson	34	12.2	16.2	1	2	17
Philadelphia	522	13.2	14.4	57	48	84
Portland, Oreg.	68			3	2	37
Providence	91	16.6	14.0	9	6	83
Richmond	63	16.9	17.7	4	7	59
White	37			1	5	22
Colored	26	(*)	(*)	3	2	131
Rochester	86	13.7	13.0	5	10	44
St. Louis	249	15.3	14.2	8	12	26
St. Paul	58			3	3	30
Salt Lake City ⁴	32	12.1	15.5	3	1	47
San Antonio	91	21.8	22.2	13	17	
San Diego	45			3	5	63
San Francisco	160	14.3	14.3	10	6	69
Schenectady	31	17.3	16.2	3	1	94
Seattle	79	10.7	11.4	4	4	40
Somerville	21	10.7	10.7	3	5	38
Spokane	31	14.8	21.0	2	3	52
Springfield, Mass.	35	12.2	14.3	3	3	47
Syracuse	51	13.3	14.7	5	5	62

Footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended March 8, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929—Continued.

City	Week ended Mar. 8, 1930		Annual death rate per 1,000 corre- sponding week, 1929	Deaths under 1 year		Infant mortality rate, week ended Mar. 8, 1930
	Total deaths	Death rate		Week ended Mar. 8, 1930	Corre- sponding week, 1929	
Tacoma.....	39	18.4	12.7	1	4	26
Toledo.....	71	11.8	14.3	6	7	55
Trenton.....	39	14.6	19.1	8	3	149
Utica.....	37	18.5	17.5	6	9	170
Washington, D. C.....	151	14.3	15.4	11	12	64
White.....	89			8	4	69
Colored.....	62	(9)	(9)	3	8	53
Waterbury.....	26			3	5	77
Wilmington, Del.....	35	14.2	9.3	5	2	113
Worcester.....	76	20.1	15.8	8	1	104
Yonkers.....	21	9.0	10.7	1	6	24
Youngstown.....	43	12.9	6.0	3	3	47

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 72 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, 83; 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 March 8, 1930, and March 9, 1929

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended March 8, 1930, and March 9, 1929

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929
New England States:								
Maine	3	-----	27	7	82	234	0	0
New Hampshire	5	-----	-----	24	13	36	1	0
Vermont	1	1	-----	-----	2	1	0	0
Massachusetts	62	88	7	186	680	365	3	6
Rhode Island	13	6	-----	8	4	70	0	0
Connecticut	22	18	20	51	39	484	0	5
Middle Atlantic States:								
New York	132	319	124	80	761	1,123	25	31
New Jersey	130	125	27	67	659	294	6	1
Pennsylvania	138	148	-----	-----	915	1,910	5	22
East North Central States:								
Ohio	56	228	33	76	747	847	10	4
Indiana	21	34	-----	37	135	426	23	0
Illinois	145	174	13	235	578	1,109	13	21
Michigan	64	84	10	26	603	520	37	36
Wisconsin	12	23	34	88	979	850	2	17
West North Central States:								
Minnesota	6	14	-----	1	284	595	6	2
Iowa	11	5	-----	2	690	17	1	1
Missouri	48	61	15	99	80	397	20	23
North Dakota	4	7	-----	-----	36	49	3	4
South Dakota	3	1	-----	-----	225	81	1	8
Nebraska	25	33	22	10	541	29	2	5
Kansas	16	15	1	40	365	167	3	1
South Atlantic States:								
Delaware	3	2	1	1	3	34	0	0
Maryland	26	24	48	230	27	126	2	3
District of Columbia	13	10	4	7	11	14	0	1
West Virginia	25	13	42	55	96	143	2	1
North Carolina	31	36	21	-----	50	100	5	0
South Carolina	9	11	1,072	716	-----	2	6	0
Georgia	10	3	154	87	285	41	5	1
Florida	13	9	4	7	275	19	0	0
East South Central States:								
Kentucky	-----	5	-----	32	114	-----	3	0
Tennessee	18	14	82	214	260	7	54	1
Alabama	11	17	153	204	242	224	3	1
Mississippi	16	10	-----	-----	-----	25	0	0

¹ New York City only.

² Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended March 8, 1930, and March 9, 1929—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929
West South Central States:								
Arkansas	20	7	118	267	8	96	4	3
Louisiana	25	29	51	55	69	56	5	3
Oklahoma ¹	18	18	80	313	85	38	2	7
Texas	51	55	77	400	192	577	2	1
Mountain States:								
Montana	2	6	—	2	31	149	0	3
Idaho	1	1	—	1	38	11	0	2
Wyoming	3	1	—	4	12	3	2	0
Colorado	18	12	—	4	266	16	5	13
New Mexico	4	1	2	—	101	11	2	7
Arizona	5	6	48	—	5	—	7	9
Utah ²	3	3	4	11	139	—	5	20
Pacific States:								
Washington	5	5	2	16	243	76	2	8
Oregon	1	14	60	136	57	271	2	1
California	53	41	52	155	1,514	58	5	21

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929
New England States:								
Maine	0	0	37	17	0	5	0	0
New Hampshire	0	0	13	31	0	0	0	0
Vermont	0	0	5	8	5	4	0	0
Massachusetts	0	1	284	283	0	0	2	4
Rhode Island	0	0	26	19	0	0	0	1
Connecticut	0	0	103	55	0	0	0	2
Middle Atlantic States:								
New York	1	2	550	567	1	12	9	22
New Jersey	1	0	290	183	0	0	3	0
Pennsylvania	2	1	557	508	2	1	17	9
East North Central States:								
Ohio	2	0	328	283	240	28	11	5
Indiana	0	1	212	312	160	108	4	0
Illinois	3	1	612	570	97	147	2	0
Michigan	0	1	363	414	63	58	0	2
Wisconsin	0	1	208	213	31	7	0	3
West North Central States:								
Minnesota	0	0	145	146	15	4	6	1
Iowa	0	0	87	219	66	58	3	3
Missouri	1	1	108	106	51	49	4	0
North Dakota	0	0	42	34	12	0	1	0
South Dakota	0	0	15	34	63	17	0	0
Nebraska	0	1	71	128	35	43	0	2
Kansas	0	0	113	204	68	68	1	5
South Atlantic States:								
Delaware	0	1	15	8	0	0	0	0
Maryland ²	0	0	82	60	0	1	4	7
District of Columbia	0	0	11	31	0	0	0	0
West Virginia	0	0	89	21	26	9	45	5
North Carolina	0	0	52	27	20	20	2	3
South Carolina	0	0	12	14	1	2	6	3
Georgia	0	0	18	13	0	18	7	0
Florida	2	1	6	8	0	0	3	7
East South Central States:								
Kentucky	0	0	70	58	87	19	1	1
Tennessee	0	0	127	38	67	1	4	5
Alabama	0	0	28	14	8	3	7	2
Mississippi	0	0	20	13	1	0	6	7
West South Central States:								
Arkansas	0	0	37	21	15	62	1	3
Louisiana	0	0	18	55	3	2	17	2
Oklahoma ¹	0	0	27	42	93	138	16	4
Texas	2	1	104	74	350	140	9	25

² Week ended Friday.

¹ Figures for 1930 are exclusive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended March 8, 1930, and March 9, 1929—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929	Week ended Mar. 8, 1930	Week ended Mar. 9, 1929
Mountain States:								
Montana.....	0	0	40	35	20	12	4	1
Idaho.....	0	0	5	10	9	5	0	0
Wyoming.....	0	0	11	30	10	3	0	0
Colorado.....	0	3	20	33	26	18	3	2
New Mexico.....	0	0	4	19	1	1	0	2
Arizona.....	1	1	20	8	29	20	0	2
Utah ¹	0	0	7	8	0	5	0	0
Pacific States:								
Washington.....	0	2	70	32	74	65	0	3
Oregon.....	1	1	40	64	20	46	1	0
California.....	3	0	207	497	53	75	7	10

¹ Week ended Friday.

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	Menin- gococ- cus menin- gitis	Diph- theria	Influ- enza	Malaria	Meas- les	Pella- gra	Poli- omyel- itis	Scarlet fever	Small- pox	Ty- phoid fever
<i>January, 1930</i>										
District of Columbia Kansas.....	1 10	70 84	8 50	-----	12 970	-----	0 3	83 619	0 273	1 7
<i>February, 1930</i>										
Arizona.....	23	33	48	2	20	-----	0	58	93	13
Connecticut.....	7	87	36	-----	87	-----	1	499	0	2
District of Columbia.....	2	64	3	-----	48	1	1	83	0	5
Indiana.....	70	146	68	-----	256	-----	1	985	800	13
Nebraska.....	25	71	27	-----	2,459	-----	0	418	236	2
Tennessee.....	62	42	864	8	665	3	3	151	84	13

<i>January, 1930</i>		Trachoma:	Cases
Actinomycosis:	Cases	Kansas.....	2
Kansas.....	1	Undulant fever:	
Chicken pox:		Kansas.....	2
District of Columbia.....	119	Vincent's angina:	
Kansas.....	666	Kansas.....	4
German measles:		Whooping cough:	
Kansas.....	19	District of Columbia.....	30
Impetigo contagiosa:		Kansas.....	271
Kansas.....	1	<i>February, 1930</i>	
Lethargic encephalitis:		Chicken pox:	
Kansas.....	1	Arizona.....	74
Mumps:		Connecticut.....	579
Kansas.....	392	District of Columbia.....	99
Psittacosis:		Indiana.....	379
Kansas.....	2	Nebraska.....	259
Scabies:		Tennessee.....	134
Kansas.....	8	Conjunctivitis (infectious):	
Septic sore throat:		Connecticut.....	3
Kansas.....	1		

	Cases	Septic sore throat:	Cases
Dysentery:			
Arizona.....	1	Connecticut.....	2
Tennessee.....	2	Nebraska.....	83
German measles:		Tennessee.....	6
Connecticut.....	150	Trachoma:	
Lead poisoning:		Arizona.....	24
Connecticut.....	2	Tennessee.....	13
Lethargic encephalitis:		Tularaemia:	
Connecticut.....	2	Tennessee.....	3
District of Columbia.....	1	Undulant fever:	
Nebraska.....	2	Indiana.....	1
Mumps:		Tennessee.....	1
Arizona.....	233	Vincent's angina:	
Connecticut.....	160	Tennessee.....	1
Indiana.....	38	Whooping cough:	
Nebraska.....	122	Arizona.....	39
Tennessee.....	32	Connecticut.....	222
Ophthalmia neonatorum:		District of Columbia.....	29
Connecticut.....	1	Indiana.....	125
Rabies in animals:		Nebraska.....	63
Connecticut.....	7	Tennessee.....	109

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 96 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 31,770,000. The estimated population of the 89 cities reporting deaths is more than 30,180,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended March 1, 1930, and March 2, 1929

		1930	1929	Estimated expectancy
<i>Cases reported</i>				
Diphtheria:				
46 States.....	1,419	1,574		
96 cities.....	654	733		924
Measles:				
45 States.....	13,374	12,522		
96 cities.....	3,338	3,475		
Meningococcus meningitis:				
46 States.....	365	303		
96 cities.....	155	174		
Poliomyelitis:				
47 States.....	20	15		
Scarlet fever:				
46 States.....	5,910	5,612		
96 cities.....	2,235	1,804		1,575
Smallpox:				
46 States.....	1,715	1,030		
96 cities.....	190	99		84
Typhoid fever:				
46 States.....	174	212		
96 cities.....	50	22		32
<i>Deaths reported</i>				
Influenza and pneumonia:				
89 cities.....	1,261	1,487		
Smallpox:				
89 cities.....	0	0		

City reports for week ended March 1, 1930

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 estimated 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 1921 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	Chick-en pox, cases re-ported	Diphtheria		Influenza		Meas-les, cases re-ported	Mumps, cases re-ported	Pneu-monia, deaths re-ported
		Cases, es-ti-mated ex-pect-ancy	Cases re-ported	Cases re-ported	Deaths re-ported			
NEW ENGLAND								
Maine:								
Portland	13	1	0	2	0	0	15	3
New Hampshire:								
Concord	0	0	2	0	0	3	0	2
Nashua	0	0	0	0	0	1	0	0
Vermont:								
Barre	1	0	0	0	0	1	0	0
Burlington	0	1	0	0	0	0	0	1
Massachusetts:								
Boston	61	44	26	1	0	141	95	38
Fall River	12	4	3	0	0	1	3	4
Springfield	9	4	4	0	0	0	7	5
Worcester	8	3	1	0	0	61	0	3
Rhode Island:								
Pawtucket	15	2	0	0	0	1	0	1
Providence	3	9	4	0	0	0	0	13
Connecticut:								
Bridgeport	4	7	2	2	2	0	0	8
Hartford	6	6	7	1	1	1	0	12
New Haven	62	1	1	2	0	0	9	7
MIDDLE ATLANTIC								
New York:								
Buffalo	21	13	8	1	2	3	30	
New York	373	223	131	43	18	283	200	289
Rochester	25	8	3	0	0	18	1	5
Syracuse	42	4	0	0	0	1	80	7
New Jersey:								
Camden	8	5	9	0	0	0	0	9
Newark	56	15	33	6	0	201	11	16
Trenton	10	3	2	1	1	21	0	11
Pennsylvania:								
Philadelphia	102	71	22	14	9	80	65	60
Pittsburgh	42	21	17	1	7	156	18	44
Reading	29	3	3	0	0	0	3	2
Scranton	4	4	1	0	0	0	0	0
EAST NORTH CENTRAL								
Ohio:								
Cincinnati	16	9	2	1	1	12	1	24
Cleveland	143	29	13	23	4	4	20	31
Columbus	21	4	2	5	3	47	1	11
Toledo	33	7	3	1	1	309	20	6
Indiana:								
Fort Wayne	1	3	1	0	0	0	0	3
Indianapolis	18	7	1	0	0	11	5	13
South Bend	2	0	0	0	0	0	0	
Terre Haute	1	1	0	0	0	0	0	3
Illinois:								
Chicago	173	99	123	15	10	20	57	115
Springfield	24	0	0	1	0	5	1	3

City reports for week ended March 1, 1930—Continued

Division, State, and city	Chick-en pox, cases reported	Diphtheria		Influenza		Meas-sles, cases reported	Mump-e, cases reported	Pneu-monia, deaths re-por-ted
		Cases, esti-mated expect-ancy	Cases re-por-ted	Cases re-por-ted	Deaths re-por-ted			
EAST NORTH CEN-TRAL—continued								
Michigan:								
Detroit.....	95	53	44	9	4	410	64	56
Flint.....	3	3	1	0	0	4	1	3
Grand Rapids.....	2	2	0	0	0	0	0	4
Wisconsin:								
Kenosha.....	6	2	0	0	0	85	0	0
Madison.....	1	1	0	0	0	8	50	19
Milwaukee.....	175	17	10	3	3	0	1	0
Racine.....	5	2	0	0	0	23	0	0
Superior.....	5	0	0	0	0	0	0	0
WEST NORTH CENTRAL								
Minnesota:								
Duluth.....	7	0	0	0	0	76	0	4
Minneapolis.....	40	15	9	1	1	34	55	10
St. Paul.....	16	10	1	0	2	10	14	10
Iowa:								
Davenport.....	0	0	1	0	0	16	1	-----
Des Moines.....	4	2	1	0	0	6	2	-----
Sioux City.....	5	0	0	0	0	24	4	-----
Waterloo.....	20	0	0	0	0	149	2	-----
Missouri:								
Kansas City.....	36	6	5	0	1	9	2	17
St. Joseph.....	4	1	2	0	0	0	0	3
St. Louis.....	30	44	34	2	1	4	16	-----
North Dakota:								
Fargo.....	9	0	0	0	0	0	12	0
Grand Forks.....	0	0	0	0	0	0	0	-----
South Dakota:								
Aberdeen.....	5	0	0	0	0	0	0	-----
Sioux Falls.....	0	0	0	0	0	9	0	-----
Nebraska:								
Omaha.....	16	4	9	0	0	62	2	0
Kansas:								
Topeka.....	23	1	2	2	0	89	9	0
Wichita.....	30	3	0	0	0	28	1	2
SOUTH ATLANTIC								
Delaware:								
Wilmington.....	2	2	1	0	0	0	0	3
Maryland:								
Baltimore.....	133	25	18	27	3	6	8	45
Cumberland.....	0	0	0	1	0	0	0	2
Frederick.....	0	0	0	0	0	0	0	0
District of Columbia:								
Washington.....	30	15	5	2	2	21	0	7
Virginia:								
Lynchburg.....	6	1	0	0	0	4	11	2
Norfolk.....	15	1	4	0	0	2	34	-----
Richmond.....	5	3	4	0	0	1	3	10
Roanoke.....	3	1	4	0	1	14	0	5
West Virginia:								
Charleston.....	18	0	1	2	0	3	1	2
Wheeling.....	4	1	0	0	1	0	0	5
North Carolina:								
Raleigh.....	15	1	0	0	1	0	0	1
Wilmington.....	14	0	1	0	0	0	0	1
Winston-Salem.....	6	1	1	0	0	0	4	4
South Carolina:								
Charleston.....	2	0	4	56	0	0	5	7
Columbia.....	9	1	0	0	0	0	2	11
Georgia:								
Atlanta.....	14	4	5	34	5	1	20	12
Brunswick.....	0	0	0	0	0	0	0	0
Savannah.....	0	1	0	8	0	1	1	1
Florida:								
Miami.....	4	2	0	0	0	3	7	1
St. Petersburg.....	14	2	4	1	1	23	16	6
Tampa.....	14	2	4	1	1	0	0	0

City reports for week ended March 1, 1930—Continued

Division, State, and city	Chick-en pox, cases reported	Diphtheria		Influenza		Meas- sles, cases re- ported	Mumps, cases re- ported	Pneu- monia, deaths re- ported
		Cases, esti- mated expect- ancy	Cases re- ported	Cases re- ported	Deaths re- ported			
EAST SOUTH CENTRAL								
Kentucky:								
Covington.....	2	0	0		0	1	0	3
Tennessee:								
Memphis.....	16	4	3		1	0	25	6
Nashville.....	2	1	2		2	4	1	5
Alabama:								
Birmingham.....	5	1	2	17	5	2	0	12
Mobile.....	2	0	0	4	0	39	0	1
Montgomery.....	5	1	2	5		80	0	
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith.....	2	1	0			0	0	
Little Rock.....	5	0	0		1	0	0	7
Louisiana:								
New Orleans.....	5	13	11	10	11	68	0	11
Shreveport.....	5	1	0		0	0	3	7
Oklahoma:								
Tulsa.....	9	1	2			240	1	
Texas:								
Dallas.....	13	5	11	6	3	129	2	8
Fort Worth.....	14	3	2		1	0	0	4
Galveston.....	0	1	0		0	0	0	3
Houston.....	2	4	5		0	1	0	7
San Antonio.....	4	3	2		3	4	0	9
MOUNTAIN								
Montana:								
Billings.....	0	0	0		1	0	2	3
Great Falls.....	3	1	0		0	0	22	2
Helena.....	0	1	0		0	0	21	0
Missoula.....	0	0	0		0	1	0	1
Idaho:								
Boise.....	0	0	0		0	0	0	0
Colorado:								
Denver.....	10							
Pueblo.....	6	0	0		0	0	35	2
New Mexico:								
Albuquerque.....	9	0	0	2	0	4	9	0
Arizona:								
Phoenix.....	0	0	0		0	5	3	5
Utah:								
Salt Lake City.....	21	2	0		1	116	11	3
Nevada:								
Reno.....	0	0	0		0	0	0	2
PACIFIC								
Washington:								
Seattle.....	54	5	2			99	74	
Spokane.....	38	2	4			0	0	
Tacoma.....	23	1	0		0	28	0	1
Oregon:								
Portland.....	25	7	1	3	1	8	11	11
Salem.....	5	0	0		0	0	6	0
California:								
Los Angeles.....	114	38	12	27	1	207	64	12
Sacramento.....	11	2	5		0	2	38	4
San Francisco....	57	17	8	3	3	472	89	8

City reports for week ended March 1, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber-cu-losis, deaths re-ported	Typhoid fever			Whoop-ing cough, cases re-ported	Deaths, all causes
	Cases, es-ti-mated ex-pectancy	Cases re-ported	Cases, es-ti-mated ex-pectancy	Cases re-ported	Deaths re-ported		Cases, es-ti-mated ex-pectancy	Cases re-ported	Deaths re-ported		
NEW ENGLAND											
Maine:											
Portland	4	8	0	0	0	1	1	0	0	0	27
New Hampshire:											
Concord	1	1	0	0	0	1	0	0	0	0	9
Nashua	2	1	0	0	0	0	0	0	0	6	-----
Vermont:											
Barre	1	0	0	0	0	1	0	0	0	0	2
Burlington	3	0	0	0	0	0	0	0	0	0	12
Massachusetts:											
Boston	84	80	0	0	0	10	2	0	0	57	245
Fall River	4	3	0	0	0	5	1	0	0	15	53
Springfield	9	11	0	0	0	1	0	0	0	12	37
Worcester	10	11	0	0	0	1	0	0	0	12	66
Rhode Island:											
Pawtucket	2	2	0	0	0	0	0	0	0	0	25
Providence	12	11	0	0	0	2	0	0	1	24	69
Connecticut:											
Bridgeport	12	18	0	0	0	1	0	0	0	0	40
Hartford	6	7	0	0	0	0	0	0	0	7	59
New Haven	10	14	0	0	0	0	0	0	0	2	45
MIDDLE ATLANTIC											
New York:											
Buffalo	29	37	0	0	0	13	0	0	0	20	188
New York	344	305	0	0	0	116	7	8	3	61	1,732
Rochester	11	15	0	0	0	1	1	0	0	1	79
Syracuse	13	47	0	0	0	3	0	0	0	56	62
New Jersey:											
Camden	6	7	0	0	0	0	0	0	0	1	32
Newark	42	54	0	0	0	14	3	0	0	29	145
Trenton	5	11	0	0	0	1	1	0	0	1	65
Pennsylvania:											
Philadelphia	95	181	0	0	0	30	2	0	0	30	551
Pittsburgh	35	19	0	0	0	8	0	0	0	16	208
Reading	8	3	0	0	0	0	0	0	0	20	33
Scranton	3	5	0	0	0	0	0	0	0	0	-----
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	22	41	1	4	0	11	0	0	0	8	172
Cleveland	52	74	0	1	0	7	0	0	0	66	218
Columbus	10	7	1	7	0	8	0	0	0	2	116
Toledo	13	5	1	5	0	8	1	3	1	8	86
Indiana:											
Fort Wayne	5	2	0	28	0	0	1	0	0	1	31
Indianapolis	13	17	10	7	0	3	0	0	0	2	-----
South Bend	2	0	0	0	0	0	0	0	0	0	-----
Terre Haute	3	5	2	0	0	0	0	0	0	0	24
Illinois:											
Chicago	138	399	3	6	0	49	2	1	0	81	831
Springfield	4	2	1	0	0	2	1	0	0	9	29
Michigan:											
Detroit	117	174	3	5	0	26	1	0	0	52	352
Flint	13	16	1	4	0	6	0	0	0	5	42
Grand Rapids	12	14	1	0	0	0	0	0	0	0	42
Wisconsin:											
Kenosha	3	12	0	0	0	0	0	0	0	13	21
Madison	4	12	0	0	0	0	0	0	0	15	-----
Milwaukee	40	49	1	1	0	6	1	0	0	42	131
Racine	4	6	1	0	0	2	0	0	0	9	25
Superior	4	2	0	0	0	0	0	0	0	0	6
WEST NORTH CENTRAL											
Minnesota:											
Duluth	10	2	0	0	0	2	0	0	0	2	18
Minneapolis	62	18	3	0	0	6	0	0	0	3	120
St. Paul	34	12	1	0	0	2	0	0	0	35	65
Iowa:											
Davenport	2	0	1	20	0	0	0	0	0	0	-----
Des Moines	9	22	1	9	0	0	0	0	0	1	20
Sioux City	1	5	0	1	0	0	0	0	0	2	-----
Waterloo	2	1	1	19	0	0	0	0	0	2	-----

City reports for week ended March 1, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
WEST NORTH CEN- TRAL—contd.											
Missouri:											
Kansas City	10	42	2	0	0	10	0	0	0	22	138
St. Joseph	2	8	0	4	0	0	0	0	0	0	26
St. Louis	42	32	2	11	0	15	1	3	0	5	238
North Dakota:											
Fargo	1	7	0	0	0	0	0	0	0	8	13
Grand Forks	1	4	0	7	—	—	0	0	—	0	—
South Dakota:											
Aberdeen	0	0	0	0	—	—	0	0	—	2	—
Sioux Falls	3	1	0	3	—	—	0	0	—	6	10
Nebraska:											
Omaha	4	11	2	6	0	0	0	0	0	0	—
Kansas:											
Topeka	2	8	0	1	0	0	0	0	0	16	15
Wichita	4	30	2	5	0	1	0	0	0	6	27
SOUTH ATLANTIC											
Delaware:											
Wilmington	5	7	0	0	0	0	0	0	0	1	33
Maryland:											
Baltimore	34	64	0	0	0	25	0	0	0	27	230
Cumberland	1	0	0	0	0	1	0	0	0	0	17
Frederick	0	1	0	0	0	0	0	0	0	0	3
District of Colum- bia:											
Washington	29	24	1	0	0	11	1	1	0	4	138
Virginia:											
Lynchburg	1	4	0	0	0	0	0	0	0	7	17
Norfolk	2	1	0	1	0	0	0	0	0	6	—
Richmond	4	10	0	0	0	5	0	0	0	0	51
Roanoke	1	0	0	0	0	1	0	0	0	6	20
West Virginia:											
Charleston	0	0	1	0	0	1	0	1	25	2	19
Wheeling	2	1	0	0	0	1	0	0	0	2	25
North Carolina:											
Raleigh	1	2	1	1	0	0	0	0	0	5	11
Wilmington	0	2	0	0	0	0	0	0	0	5	16
Winston-Salem	1	0	1	0	0	1	0	0	0	2	9
South Carolina:											
Charleston	0	0	0	0	0	1	0	0	0	0	16
Columbia	0	0	1	0	0	0	0	0	0	9	24
Georgia:											
Atlanta	5	9	4	0	0	9	0	0	0	0	112
Brunswick	0	0	0	0	0	1	0	0	0	0	3
Savannah	0	3	1	0	0	2	0	2	0	0	34
Florida:											
Miami	1	1	0	0	0	0	1	1	0	0	29
St. Petersburg	0	0	0	0	0	0	0	0	0	0	31
Tampa	1	2	0	0	0	1	1	2	0	0	23
EAST SOUTH CENTRAL											
Kentucky:											
Covington	2	3	0	0	0	1	0	0	0	0	21
Tennessee:											
Memphis	8	18	1	0	0	6	1	2	0	4	87
Nashville	3	3	0	1	0	5	1	0	0	3	41
Alabama:											
Birmingham	2	4	5	0	0	5	0	3	0	1	84
Mobile	0	1	1	0	0	1	0	0	1	1	18
Montgomery	0	0	0	0	0	0	0	0	0	0	—
WEST SOUTH CEN- TRAL											
Arkansas:											
Fort Smith	0	0	0	0	0	0	0	0	0	0	—
Little Rock	1	3	0	3	0	3	0	0	0	3	—
Louisiana:											
New Orleans	7	18	1	0	0	7	2	0	0	1	164
Shreveport	1	0	1	0	0	2	1	0	0	1	33
Oklahoma:											
Tulsa	2	1	1	1	—	—	0	0	10	—	—

* 6 cases nonresidents.

City reports for week ended March 1, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber-cu-losis, deaths re-ported	Typhoid fever			Whoop-ing cough, cases re-ported	Deaths, all causes
	Cases, esti-mated expectancy	Cases re-ported	Cases, esti-mated expectancy	Cases re-ported	Deaths re-ported		Cases, esti-mated expectancy	Cases re-ported	Deaths re-ported		
WEST SOUTH CENTRAL—contd.											
Texas:											
Dallas.....	4	6	4	0	0	4	0	0	0	0	57
Fort Worth.....	0	7	3	1	0	1	0	0	0	0	42
Galveston.....	0	0	0	0	0	0	0	0	0	0	16
Houston.....	1	4	3	16	0	8	0	0	0	0	85
San Antonio.....	2	0	0	13	0	15	0	0	0	0	74
MOUNTAIN											
Montana:											
Billings.....	1	2	0	0	0	0	0	0	0	0	6
Great Falls.....	2	28	1	0	0	0	0	0	0	0	14
Helena.....	0	0	0	0	0	0	0	0	0	0	0
Missoula.....	1	1	1	0	0	0	0	0	0	0	5
Idaho:											
Boise.....	0	0	0	0	0	0	0	0	0	3	2
Colorado:											
Denver.....	14	0	0	2	0	0	0	0	0	0	13
Pueblo.....	1	0	0	0	0	0	0	0	0	0	0
New Mexico:											
Albuquerque.....	1	0	0	0	0	3	0	0	0	0	11
Arizona:											
Phoenix.....	0	2	0	8	0	4	0	0	0	0	23
Utah:											
Salt Lake City.....	4	8	1	1	0	1	0	0	0	28	42
Nevada:											
Reno.....	0	1	0	0	0	0	0	0	0	0	6
PACIFIC											
Washington:											
Seattle.....	10	34	3	9	-----	-----	1	0	-----	13	-----
Spokane.....	7	2	9	21	-----	-----	0	3	-----	14	-----
Tacoma.....	2	2	3	4	0	0	0	0	0	5	29
Oregon:											
Portland.....	7	6	14	9	0	3	0	0	0	6	70
Salem.....	1	0	1	1	0	0	0	0	0	5	-----
California:											
Los Angeles.....	39	86	2	2	0	28	1	0	2	43	291
Sacramento.....	2	9	1	3	0	2	0	0	0	1	32
San Francisco.....	25	41	1	4	0	11	1	0	0	4	184

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, esti-mated expectancy	Cases	Deaths
NEW ENGLAND									
Maine:									
Portland.....	1	0	0	1	0	0	0	0	0
Massachusetts:									
Boston.....	2	3	1	0	0	0	1	0	0
Connecticut:									
Hartford.....	1	0	0	0	0	0	0	0	0
New Haven.....	1	1	0	0	0	0	0	0	0
MIDDLE ATLANTIC									
New York:									
Buffalo.....	5	1	0	0	0	0	0	0	0
New York.....	23	7	3	1	0	0	1	0	0
Syracuse.....	0	1	0	1	0	0	0	0	0
New Jersey:									
Newark.....	5	1	0	0	0	0	0	0	0
Pennsylvania:									
Philadelphia.....	2	2	1	0	0	0	0	0	0
Pittsburgh.....	4	1	0	0	0	0	0	0	0

City reports for week ended March 1, 1930—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:									
Cincinnati	0	1	0	0	0	0	0	0	0
Cleveland	6	0	1	2	0	0	0	0	0
Toledo	1	1	0	0	0	0	0	0	0
Indiana:									
Indianapolis	11	0	0	0	0	0	0	0	0
Terre Haute	2	0	0	0	0	0	0	0	0
Illinois:									
Chicago	6	2	0	0	0	0	0	0	0
Michigan:									
Detroit	24	18	1	0	0	0	0	0	0
Flint	1	0	0	0	0	0	0	0	0
Grand Rapids	0	1	0	0	0	0	0	0	0
Wisconsin:									
Milwaukee	1	1	0	0	0	0	0	0	0
Racine	1	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	1	0	0	0	0	0	0	0	0
St. Paul	1	0	1	0	0	0	0	0	0
Iowa:									
Davenport	0	0	0	0	0	0	0	1	0
Missouri:									
Kansas City	4	7	0	0	0	0	0	0	0
St. Joseph	0	1	0	0	0	0	0	0	0
St. Louis	8	4	0	0	0	0	0	0	0
Nebraska:									
Omaha	2	0	0	0	0	0	0	0	0
Kansas:									
Wichita	1	0	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	1	0	1	0	0	0	0	0	0
Virginia:									
Norfolk	1	0	0	0	0	0	0	0	0
Richmond	0	1	0	0	0	0	0	0	0
West Virginia:									
Wheeling	1	0	0	0	0	0	0	0	0
North Carolina:									
Wilmington	0	0	0	0	0	0	1	0	0
South Carolina:									
Charleston	0	0	0	0	0	5	0	0	0
Columbia	0	1	0	0	0	0	0	0	0
Georgia:									
Atlanta	11	3	0	0	0	0	1	0	0
Florida:									
Miami	0	0	0	0	0	0	1	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	11	5	0	0	1	1	0	0	0
Nashville	1	9	0	0	0	0	0	0	0
Alabama:									
Birmingham	1	0	0	0	1	0	0	0	0
Mobile	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
New Orleans	1	1	0	0	0	0	0	0	0
Texas:									
Houston ¹	0	9	0	0	0	1	0	0	0
MOUNTAIN									
Montana:									
Great Falls	1	0	0	0	0	0	0	0	0
Arizona:									
Phoenix	0	1	0	0	0	1	0	0	0
Utah:									
Salt Lake City	8	1	0	0	0	0	0	0	0
PACIFIC									
Oregon:									
Portland	1	1	0	0	0	0	0	0	0
California:									
Los Angeles	2	1	0	0	0	0	0	0	0
Sacramento	2	1	0	0	0	0	0	0	0
San Francisco	2	0	0	0	0	0	0	0	0

¹ Nonresident.² Dengue; 1 death at Houston, Tex.

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended March 1, 1930, compared with those for a like period ended March 2, 1929. 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 an estimated aggregate population of more than 32,000,000. The 91 cities reporting deaths have more than 30,500,000 estimated population.

Summary of weekly reports from cities, January 26 to March 1, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929¹

DIPHTHERIA CASE RATES

	Week ended—									
	Feb. 1, 1930	Feb. 2, 1929	Feb. 8, 1930	Feb. 9, 1929	Feb. 15, 1930	Feb. 16, 1929	Feb. 22, 1930	Feb. 23, 1929	Mar. 1, 1930	Mar. 2, 1929
	98 cities	116	109	105	117	97	121	93	118	107	121
New England	124	108	112	117	95	130	100	117	111	123
Middle Atlantic	103	133	97	141	83	147	87	139	109	140
East North Central	140	106	103	113	115	115	102	106	125	131
West North Central	76	90	79	146	104	150	93	131	118	135
South Atlantic	106	107	70	67	93	73	110	67	88	64
East South Central	94	68	81	82	58	82	108	68	61	55
West South Central	232	95	168	114	146	114	86	175	108	145
Mountain	34	70	34	78	0	44	69	44	0	61
Pacific	80	65	43	68	87	77	61	106	73	72

MEASLES CASE RATES

98 cities	284	274	329	252	421	404	456	456	548	578
New England	312	514	305	561	432	541	383	382	463	635
Middle Atlantic	153	93	186	224	114	267	140	364	158	
East North Central	168	418	172	66	253	761	269	883	351	1,142
West North Central	416	770	695	1,193	793	983	759	1,253	920	1,555
South Atlantic	287	103	245	133	906	135	403	167	186	197
East South Central	61	7	81	14	357	41	681	0	850	62
West South Central	314	34	695	34	743	50	799	80	755	57
Mountain	386	697	479	1,341	908	1,019	747	923	3,004	697
Pacific	1,224	99	1,200	135	1,450	164	1,483	145	1,908	229

SCARLET FEVER CASE RATES

98 cities	298	232	327	246	312	277	301	261	367	298
New England	317	303	479	305	350	373	374	292	368	337
Middle Atlantic	262	190	274	186	246	222	255	202	325	230
East North Central	420	280	432	318	438	340	425	341	513	402
West North Central	277	306	332	312	324	360	321	373	334	321
South Atlantic	205	131	203	146	231	157	216	144	236	187
East South Central	162	157	216	222	260	169	185	198	219	
West South Central	78	145	138	232	116	265	101	270	116	202
Mountain	403	61	411	113	599	87	300	113	686	218
Pacific	357	350	338	304	314	328	236	292	411	493

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, 1930 and 1929, respectively.

² Portland, Me., Kansas City, Mo., and Denver, Colo., not included.

³ Birmingham, Ala., and Denver, Colo., not included.

⁴ South Bend, Ind., and Denver, Colo., not included.

⁵ Portland, Me., not included.

⁶ South Bend, Ind., not included.

⁷ Kansas City, Mo., not included.

⁸ Birmingham, Ala., not included.

⁹ Denver, Colo., not included.

Summary of weekly reports from cities, January 26 to March 1, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929—Continued

SMALLPOX CASE RATES

	Week ended—									
	Feb. 1, 1930	Feb. 2, 1929	Feb. 8, 1930	Feb. 9, 1929	Feb. 15, 1930	Feb. 16, 1929	Feb. 22, 1930	Feb. 23, 1929	Mar. 1, 1930	Mar. 2, 1929
98 cities.....	32	7	230	5	27	8	24	12	31	16
New England.....	0	0	2	0	7	0	0	0	0	2
Middle Atlantic.....	0	0	0	0	0	0	0	0	0	0
East North Central.....	39	10	34	8	33	15	20	15	40	24
West North Central.....	47	8	69	2	47	0	91	15	89	15
South Atlantic.....	5	11	4	0	5	2	2	4	2	7
East South Central.....	13	7	0	0	39	0	13	0	7	7
West South Central.....	78	27	101	50	105	23	56	95	120	107
Mountain.....	60	78	34	26	65	70	17	35	51	87
Pacific.....	177	7	146	7	104	24	118	19	102	24

TYPHOID FEVER CASE RATES

98 cities.....	5	4	24	5	5	5	5	4	18	4
New England.....	0	2	6	2	6	4	4	9	0	2
Middle Atlantic.....	5	4	3	4	2	4	7	4	4	2
East North Central.....	3	1	5	3	3	2	1	2	1	0
West North Central.....	4	6	2	2	9	12	2	6	6	3
South Atlantic.....	7	7	11	6	7	6	13	4	55	2
East South Central.....	7	0	20	7	10	14	7	7	84	14
West South Central.....	4	8	7	27	10	11	4	8	0	19
Mountain.....	9	0	0	9	0	0	9	0	0	9
Pacific.....	17	7	2	7	5	7	12	5	7	7

INFLUENZA DEATH RATES

91 cities.....	17	84	214	58	20	54	20	45	20	39
New England.....	2	141	5	90	4	56	16	40	11	20
Middle Atlantic.....	15	82	11	58	15	44	16	25	17	30
East North Central.....	13	46	13	28	18	26	16	33	16	31
West North Central.....	18	45	19	51	12	23	12	45	15	39
South Atlantic.....	11	114	11	22	29	60	20	69	26	67
East South Central.....	59	298	37	127	66	224	81	82	59	149
West South Central.....	88	188	54	102	73	152	72	123	69	86
Mountain.....	9	35	17	78	17	57	26	78	34	52
Pacific.....	8	41	9	41	21	41	3	38	12	31

PNEUMONIA DEATH RATES

91 cities.....	169	273	2176	230	174	222	182	193	196	222
New England.....	177	507	151	384	177	308	221	233	213	272
Middle Atlantic.....	166	386	190	296	202	254	200	192	230	240
East North Central.....	129	170	139	138	129	163	153	170	180	180
West North Central.....	160	188	146	186	109	180	151	207	136	228
South Atlantic.....	218	268	195	246	195	243	203	238	216	255
East South Central.....	272	209	238	194	263	164	272	157	199	284
West South Central.....	314	191	291	191	276	211	188	250	199	207
Mountain.....	223	148	274	235	188	244	240	226	223	279
Pacific.....	114	113	160	129	132	123	33	129	77	148

² Portland, Me., Kansas City, Mo., and Denver, Colo., not included.

³ Birmingham, Ala., and Denver, Colo., not included.

⁴ South Bend, Ind., and Denver, Colo., not included.

⁵ Portland, Me., not included.

⁶ South Bend, Ind., not included.

⁷ Kansas City, Mo., not included.

⁸ Birmingham, Ala., not included.

⁹ Denver, Colo., not included.

FOREIGN AND INSULAR

CANADA

Provinces — Communicable diseases — Week ended February 22, 1930.—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases in Canada as follows:

Province	Cerebro-spinal fever	Influenza	Polio-myelitis	Smallpox
Prince Edward Island ¹				
Nova Scotia ¹				
New Brunswick.....	1			
Quebec.....	1			
Ontario.....		10		28
Manitoba ¹				
Saskatchewan.....				64
Alberta.....	1		1	1
British Columbia.....				4
Total.....	3	10	1	97

¹No case of any disease included in the table was reported during the week.

Quebec Province—Communicable diseases—Week ended March 1, 1930.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended March 1, 1930, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	2	Mumps.....	204
Chicken pox.....	94	Scarlet fever.....	114
Diphtheria.....	50	Tuberculosis.....	38
German measles.....	11	Typhoid fever.....	26
Influenza.....	209	Whooping cough.....	115
Measles.....	161		

CHINA

Meningitis.—During the week ended February 22, 1930, 5 cases of meningitis with 5 deaths were reported in Hong Kong, China. One case was reported during the week ended March 1. In Canton, during the week ended March 1, 9 cases of meningitis with 7 deaths were reported.

SHOERA, PLAGUE, SMALLPOX, TYPHUS, TYPHIS, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Hygiene, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables 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.

ICU fatalities: 39/55: D: deaths: P: present]

India (French):	1	1	5	2	10	1
Chander Nagar.....	1	1	5	4	3	1
Karikal.....	1	1	3	2	2	3
Fondicherry Province.....	1	1	3	1	2	2
India (Portuguese):	1	2	3	1	1	1
Indo-China (see also table below):	1	1	1	1	1	1
Fuompenh.....	3	3	61	43	1	2
Saigon and Cholon.....	3	2	83	87	2	2
Japan.....	2	2	1	1	1	1
Kobe.....	2	9	3	3	1	1
Osaka.....	6	41	14	14	1	1
Shimonozaki.....	5	2	2	2	2	2
Siam.....	180	26	9	2	3	2
Anthoang.....	112	19	4	1	1	1
Ayundhaya.....	10	10	1	1	1	1
Bangkok.....	8	8	2	2	3	2
Dhamnapur.....	6	6	2	1	1	1
Lobpuri.....	2	2	3	2	2	2
Nagara Rajisma.....	5	5	2	2	2	2
Sridharmaraj Province.....	16	16	13	13	3	1
On vessel:						
S. S. Shimose at Shanghai.....						
S. S. Ternu Maru at Nagasaki, from Shanghai.....						
S. S. Fiji Islands.....						
S. S. Atura, Fiji Islands.....						

11 cases of cholera occurred on steamship at Suva, Fiji Islands, week ended Mar. 1, 1880.

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

PLAQUE

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

3 deaths from bubonic plague were reported in Andalgalá, Catamarca Province, Argentina, from Feb. 5 to Mar. 1, 1930. 21 cases of plague with 8 deaths were reported Jan. 29, 1930, in the State of São Paulo, Brazil; 15 of these cases were in the city of São Paulo.

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

PLAQUE—Continued

[O indicates cases; D, deaths; P, present.]

Turkey: Adults		Jan.- 1930		Jan.- 1930		Jan.- 1930	
Union of Soviet Soviet Republics:		Octo- ber, 1929		Octo- ber, 1929		Octo- ber, 1929	
Caucasus.....	0 1	0 2	0 1	0 1	0 1	0 1	0 1
Kasak.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Ural—Kirghis.....	0 0	0 1	0 0	0 0	0 0	0 0	0 0
Union of South Africa:							
Cape Province.....	0 0	17 13	4	0 0	7	7	0 0
Orange Free State.....	0 0	13 5	0	0 0	1	1	0 0
Transvaal.....	0 0	7 4	3	0 0	1	1	0 0
Transvaal.....	0 0	4 3	0	0 0	1	1	0 0
On vessel:							
S. S. Chabon, at Port Said, from Jaffa.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
S. S. Chabon, at Porto Novo, from Lagos.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
At Rio de Janeiro, Brazil, from Argentina.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
British East Africa (see also table above):							
Kenya.....	0 0	28 146	167	0 0	15	15	0 0
Uganda.....	0 0	511 384	179	0 0	105	105	0 0
D. 740 451 351	7 12	14 17	8	0 0	94	94	0 0
D. 6 1 3	4 3	6 6	4	0 0	17	17	0 0
D. 4 2 5	8 5	9 13	4	0 0	13	13	0 0
D. 1 2 2	2 1	2 1	0 0	0 0	0 0	0 0	0 0
D. 9 195 203	195 203	182 182	4	0 0	10	10	0 0
D. 48 182 193	9 2	168 42	0 0	0 0	0 0	0 0	0 0
D. 9 9 2	9 2	32 32	0 0	0 0	0 0	0 0	0 0
D. 1 13 17	13 17	5 5	0 0	0 0	0 0	0 0	0 0
D. 1 13 17	13 17	5 5	0 0	0 0	0 0	0 0	0 0
D. 5 10	5 10	0 0	0 0	0 0	0 0	0 0	0 0
D. 6 10	6 10	0 0	0 0	0 0	0 0	0 0	0 0
D. 11 12 5	11 12 5	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
D. 11 11 5	11 11 5	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Indo-China (see also table above):							
Madagascar (see also table above):							
Amboina Province.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Antsirabe Province.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Itasy Province.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Majunga Province.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Miarinarivo.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
On vessel:							
S. S. Chabon, at Port Said, from Jaffa.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
S. S. Chabon, at Porto Novo, from Lagos.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
At Rio de Janeiro, Brazil, from Argentina.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Madagascar—Continued.							
Moramanga Province.....	0 0	2 2	0 0	2 2	0 0	2 2	0 0
Tamatave Province.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Tanancive Province.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Peru.....	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Senegal:							
Baoul.....	0 0	32 32	42 42	0 0	45 45	23 23	0 0
Dakar.....	0 0	13 13	24 24	0 0	13 13	16 16	0 0
Louga.....	0 0	76 76	26 26	0 0	17 17	8 8	0 0
Rufisque.....	0 0	65 65	17 17	0 0	2 2	6 6	0 0
Thies.....	0 0	121 121	108 108	0 0	41 41	1 1	0 0
Tiveouane.....	0 0	70 70	64 64	0 0	24 24	1 1	0 0

1 Incomplete reports.

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

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

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

SMALLPOX—Continued

IIC indicates cases; D, deaths; P, present.]

Pondicherry Province.....	0	12	8	5	10	7	7	6	6	6	13	10	1
India (Portuguese).....	0	7	8	3	10	7	1	7	6	5	10	1	1
India (see also table below).....	0	1	1	1	1	1	2	3	1	3			
Indo-China.....	0	3	1	1	2								
Principe.....	0	3	1	1	2								
Saigon and Cholon.....	0	0	0	0	0								
Iraq:.....	0	0	0	0	0								
Baghdad.....	0	0	0	0	0								
Basra.....	0	0	0	0	0								
Diyah Liwa.....	0	0	0	0	0								
Kirkuk Liwa.....	0	0	0	0	0								
Mossoul.....	0	0	0	0	0								
Ivory Coast (see table below).....	0	0	0	0	0								
Mexico (see also table below).....	0	0	0	0	0								
Acapulco.....	0	0	4	1	1								
Aguascalientes.....	0	0	7	6	8	1							
Chihuahua.....	0	0	6	8	4	1	6	1	6	1	2	3	3
Jalisco (State): Guadalajara.....	0	0	3	2	10	6	11	3	3	2	3	4	1
Juarez.....	0	0	0	0	1	2	2	2	2	5	3	4	1
Mexico City and surrounding territory.....	0	0	21	7	8	9	19	2	16	5	3	10	9
Morelos State.....	0	0	6	1	8	4	9	1	3	1	3	1	
Morocco (see table below).....	0	0	141	110	39	18	6						
Netherlands: Rotterdam.....	0	0	1	7	5	1	1						
Nigeria: Lagos.....	0	0	0	0	1								
Panama.....	0	0	5	36	154	11							
Peru (see table below).....	0	0	0	0	0								
Philippine Islands: Sarangani and Bantul Islands ¹	0	0	2	1	2	4							
Poland.....	0	0	0	1	17	2	3	1					
Portugal.....	0	0	0	0	0	0	1						
Lisbon.....	0	0	0	0	0	0	0						
Porto.....	0	0	0	0	0	0	0						
Rumania.....	0	0	0	0	0	0	0						
Siam.....	0	0	32	23	33	7	3	6	27	9	2	1	3
Somaliland, British: Boales.....	0	0	7	5	2	2	1	2	2	1	2	14	6
Somaliland, French: Jibuti.....	0	0	31	2	4	3	24	1	3	1	1	1	6
	0	0	10	0	0	0	0	0	0	0	0	0	0
	0	0	21	0	0	0	0	0	0	0	0	0	0

¹ Newspaper reports of Feb. 4, 1930, show an epidemic of smallpox in Tonasenape, Morelos State, Mexico, and vicinity, giving 600 deaths in preceding 2 weeks.
On Feb. 1, 1930, 317 cases of smallpox with 163 deaths were reported to that date in the Sarangani and Bantul Islands, Philippine Islands.

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

SMALLPOX—Continued

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

Place	Week ended—												February, 1930						
	July 26- Aug. 2 Aug. 24- Sept. 1 1929	Aug. 28- Sept. 1 Sept. 21 1929	Sept. 22- Oct. 19 Oct. 21 1929	Oct. 20- Nov. 16 Nov. 18 1929	Nov. 17- Dec. 14 Dec. 16 1929	December, 1929	January, 1930					1	2	3	4	5	6	15	22
Straits Settlements.....																			
Sudan (Anglo-Egyptian).....	0	67	668	260	61	264	12	30	3	205	1	1	1	1	1	1	1	1	1
Sudan (French) (see table below).	D	73	96	10	12	45	14	9	42	14	21	1	8	20	6	6	19	2	2
Syria (see table below).																			
Tunisia: Tunis.....	0																		
Turkey (see table below).																			
Union of South Africa:																			
Cape Province.....	0																		
Natal.....	0																		
Transvaal.....	0																		
Upper Volta:																			
On vessel:																			
S. S. Karoo, at Zanzibar.....																			
S. S. Tagapu, at Manila, from Australia.....																			
S. S. Umbruna, at Cape Town, from London.....																			
Place	August, 1929												November, 1929						
	Aug. 1-10	Aug. 11-20	Aug. 21-30	Sept. 1-10	Sept. 11-20	Sept. 21-30	Oct. 1-10	Oct. 11-20	Oct. 21-30	Nov. 1-10	Nov. 11-20	Nov. 21-31	Dec. 1-10	Dec. 11-20	Dec. 21-31	Jan. 1-10	Jan. 11-20	Jan. 21-31	
Belgian Congo.....																			
Dahomey.....	0																		
Indo-China (see also table above).....	0																		
Ivory Coast.....	0																		
Sudan (French).....	0																		
Syria: Beirut.....	D	29	37	2	28	22	1	6	0	16	10	17	4	4	4	23	6	43	43

Place	Aug. 1929	Sep. 1929	Oct. 1929	Nov. 1929	Dec. 1929	Jan. 1930	Place	Aug. 1929	Sep. 1929	Oct. 1929	Nov. 1929	Dec. 1929	Jan. 1930
Barbados: La Pat.	0	120	22	.....	.....	.....	Morocco.....	0	10	3	12	41	84
British East Africa (see also table above):	0	60	66	278	2	.....	Persia.....	0	62	67	.....	.....	.....
Kenya:	0	1	1	2	2	.....	Turkey.....	0	1	1	168	87	.....
Chios.....	0	1	1	2	2	0	1	41	100	183
Mexico: Durango (see also table above)	0	2	2	2	4	12	0	1	1	9	29	12
.....	0	0	0	0	0	0	0	0	0	0	0	0

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TYPHUS FEVER

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

Place	Week ended—				January, 1930				February, 1930													
	July 28	Aug. 25	Sept. 22	Oct. 19	December, 1929	November, 1929	Oct. 20- Nov. 16, 1929	Nov. 19, 1929	23	30	7	14	21	28	4	11	18	25	1	8	16	22
Algeria:																						
Algiers: Constantine Department.....	C	4	10	2	.....	.....	1	.....	1	1	1	1	1	1	1	1	1	1	1	2	1	1
Oran:.....	C	2	3	1	.....	.....	1	.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bolivia:																						
La Pat.:																						
Peru: Province—Callao Canton.....	C	19	13	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1
Brasil: Sao Paulo: ¹	D	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bulgaria.....	C	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sofia.....	D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chile:																						
Talcahuano.....	D	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Valparaiso.....	C	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chile: Taltal.....	C	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

¹ Press reports show that 10 deaths from typhus fever occurred in Sao Paulo, Brasil, from Nov. 3 to 30, 1929.

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

TYPHUS FEVER—Continued

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

Place	Week ended—																
	July 28- Aug. 25- Sept. 24- Oct. 23- Nov. 19- Dec. 16- 1929			Oct. 20- 22- 24- 26- 28- 29- 1929			November, 1929			December, 1929			January, 1930			February, 1930	
Chosen (see table below).																	
Czechoslovakia (see table below).																	
Egypt:																	
Alexandria	C	1	2														
Assuan	D																
Bahoda Province	C	1	6	16	2												
Cairo	C	1	2	4	1												
Dahrah	C	1	3	1	1												
Dahrah	D																
Port Said	C	3															
Port Said	D																
Greece (see table below).																	
Iraq: Baghdad	C	2	1	1													
Iraq: Baghdad	D																
Ireland (Irish Free State): Donegal County—Dunfanaghy	C																
Iarvia (see table below).																	
Lithuania (see table below).																	
Mexico:																	
Acapulco	D	1															
Acapulco	C	11	14	9	3	1	1	2	4								
Acapulco	D	1	6	1	1												
Acapulco	C	1	6	5	4												
Acapulco	D	1	6	3	2												
Acapulco	C	23															
Acapulco	D	8															
Mexico City, including municipalities in Federal Dis-	D																
trict.	C																
Mexico City, including municipalities in Federal Dis-	D																
trict.	C																
Mexico City, including municipalities in Federal Dis-	D																
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Mexico City, including municipalities in Federal Dis-	D																
trict.	C																
Mexico City, including municipalities in Federal Dis-	D																

Rumania	0	9	39	25	10	8	11	32	52	14	68	41	8
Tunisia	D	1	4	5	2	1	1	1	9	1	4	2	
Turkey (see table below)	0	4	1	1	1	1	1	1					
Union of South Africa:													
Cape Province													
Natal	C	1	P	P	P	P	P	P	P	P	P	P	
Orange Free State	C	P	P	P	P	P	P	P	P	P	P	P	
Transvaal	C	P	P	P	P	P	P	P	P	P	P	P	
Yugoslavia (see table below).													

Place	August, 1929	September, 1929	October, 1929	November, 1929	December, 1929	January, 1930	Place	August, 1929	September, 1929	October, 1929	November, 1929	December, 1929	
Chosen: Seoul	0	1	1	3	1		Peru: Arequipa	D	3	1	4	10	2
Czechoslovakia	0	0	1	1	1		Turkey	D	1	1	1	1	2
France	0	1	3	7	1		Yugoslavia	D	7	2	1	6	1
Greece: Athens	0	6	3	7	6	1						26	3
Latvia	0	1	6	4	5	2							
Lithuania	D	1	3	1	1								

YELLOW FEVER

During the month of September, 1929, cases of yellow fever were reported as follows: Nictéroy, Brazil, 1 case; Rio de Janeiro, Brazil, 2 cases; Monrovia, Liberia, 1 case.

X