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STANDARDIZATION OF MORBIDITY REPORTING AND DEVELOPMENT OF THE MORBIDITY REPORTING AREA ¹

By R. C. Williams, Assistant Surgeon General, United States Public Health Service

The prompt, complete, and accurate reporting of the notifiable diseases is one of the fundamentals upon which public health work is based. Without the knowledge derived from such reporting, the health officer is not informed as to what problems he has to deal with or where such problems require concentrated effort. There can not be too frequent repetition of the importance of prompt and complete reporting of the notifiable diseases.

A comparison of the morbidity reports made to the Public Health Service over a series of years shows that progress is being made; but there is still much room for improvement. The Pennsylvania State Department of Health has recently made a study of case fatality rates in that State. The reports of cases were checked with the mortality registration cards and fatality rates were computed, using only those deaths which had been reported as cases. This eliminates the error due to the inclusion of many deaths for which there were no case reports.

There has been received from the State Department of Health of Pennsylvania by the Public Health Service a series of such computations which include estimated case fatality rates, to which some factor of correction has been applied, and which are designated "Probable Correct Ratios." These estimated probable correct ratios, together with the rates computed by the Public Health Service, are presented in the following table:

¹ Presented at the Thirtieth Annual Conference of State and Territorial Health Officers with the United States Public Health Service, Washington, D..C., June 6, 1932.

Number of cases for each death

	Probable correct ratios, esti- mated by Pennsyl- vania State Depart- ment of Health	Ratios computed by the Public Health Service
Diphtheria	15 400	11 106
Scarlet fever	100	78
Typhoid fever	12 125	26

If these probable correct ratios can be accepted as the true ratios of cases to deaths, and if they are applicable to the United States as a whole, then the average number of cases for each death as reported to the Public Health Service by State health officers is too low for each of the diseases included in the table. A comparison of the ratios computed by the Public Health Service with those suggested by the State of Pennsylvania shows that the Public Health Service case fatality ratios are the following percentages of the ratios estimated as probably correct by the Pennsylvania State Department of Health:

Diphtheriaper cent	73. 3
Measlesdo	26. 4
Scarlet feverdo	78. 0
Typhoid feverdo	41.7
Whooping coughdo	

The case fatality ratios of the Public Health Service are based on the averages of reports for all States in the registration area for deaths over a period of three years. The figures include many rural areas in which very little has been done to secure reports. A much better showing is made by many States and cities. In fact, as the ratios are based on averages, about one-half of the States make a better showing.

In June, 1917, the first regular weekly telegraphic reports of the prevalence of communicable diseases were received by the Public Health Service from State health officers. For several weeks these reports were received from only one State—California; but by December, 1917, telegraphic reports were published weekly from eight States. Two years later, in December, 1919, 26 States were making telegraphic reports. At the present time these reports are received from all of the States except Nevada, although two or three States are able to report for only a few diseases. However, improvement in this respect is being made. The State of Virginia is now making plans to secure weekly reports of several diseases which have heretofore been reported to the State health department monthly. This will add one more State to the number from which weekly telegraphic reports for nine diseases are being received by the United States Public Health Service.

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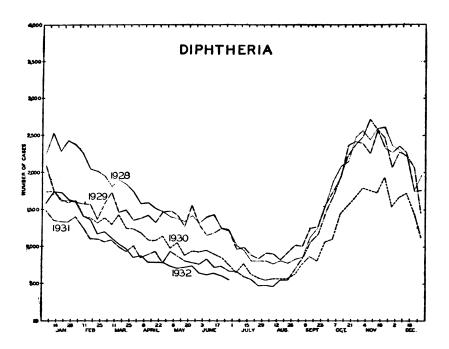
Before September, 1927, the telegraphic reports included most of the diseases notifiable in each State, but the cost of the telegrams made serious inroads on the limited appropriations of the Public Health Service available for the purpose, and the number of diseases for which telegraphic reports were requested was limited to eight; viz, diphtheria, influenza, measles, meningococcus meningitis, poliomyelitis, scarlet fever, smallpox, and typhoid fever. Typhus fever has since been added, making nine diseases now included in the reports from most of the States.

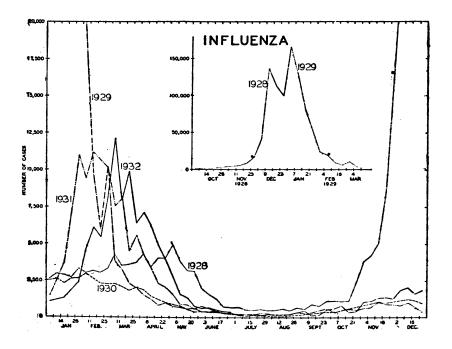
Since May, 1925, a mimeographed summary of the telegraphic reports from all the States has been mailed each week to the State health officers. In spite of the incompleteness of the reports, it is believed that this bulletin has demonstrated its usefulness as an index of current conditions with reference to important communicable diseases. At least it has saved many State health officers the trouble of writing to the Public Health Service for special reports as to the prevalence of diseases when epidemics seemed to threaten.

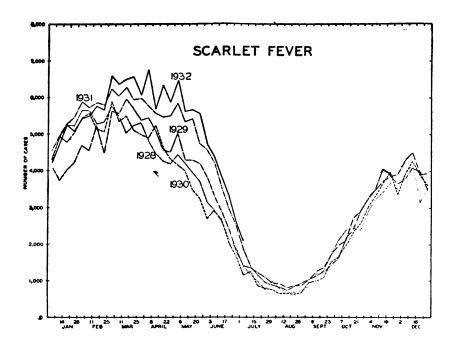
These weekly reports as published in the Public Health Reports for several years have been complete for the States which report for each disease; but in the mimeographed bulletin there are frequent blanks, as telegrams from some of the States are sometimes not received before the bulletin is made up. When the report from any State is not received by Thursday morning, a telegram requesting it is sent to the State health officer. A prompt reply to this telegram enables the Public Health Service to publish the data in the issue of the Public Health Reports for the following week.

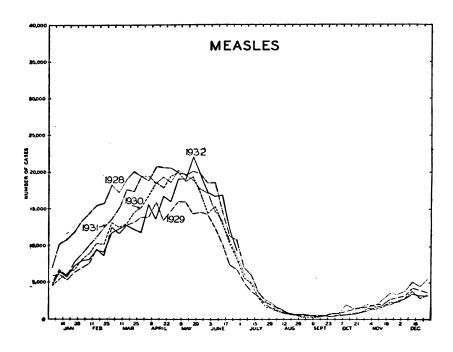
The weekly data are transferred to charts which are kept current by the Public Health Service, and they are very convenient for use in making comparisons between current reports and similar reports for preceding years. They also show clearly the seasonal fluctuations in the prevalence of the diseases included. These charts are reproduced here as of possible interest.

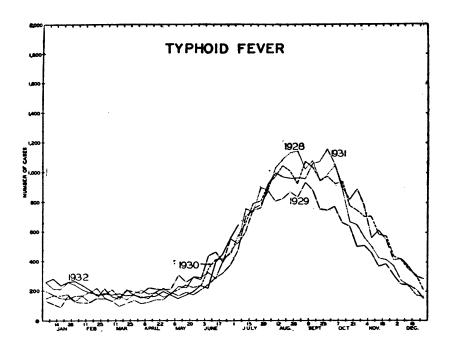
The suggestion has been made that it would be of advantage for the various States to use uniform or standard tables in the presentation of their reports relating to the notifiable diseases. In connection with the development of the proposed morbidity reporting area, it has seemed proper that the Public Health Service should devise such tables and present them to the various States and finally to this conference for consideration. Therefore, since the last conference tentative standard forms for use by States in tabulating morbidity statistics have been prepared and submitted for criticism to a number of State health officers. These tables are not intended for use in making reports to the Public Health Service, but as guides or models to aid in securing comparability in the published morbidity statistics of State health departments.

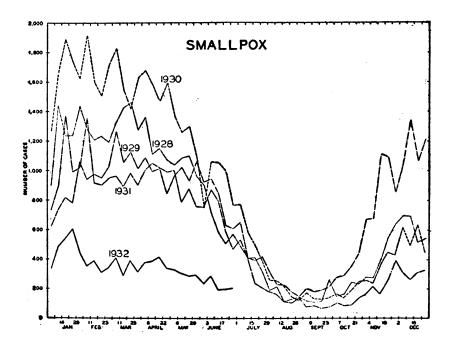


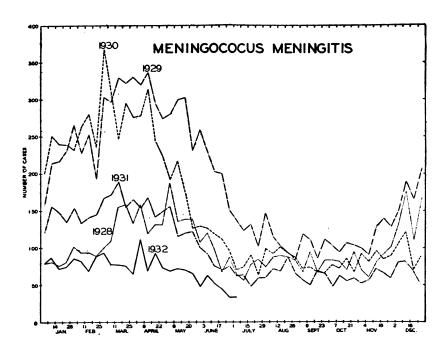


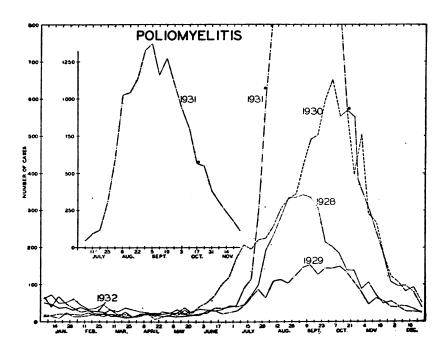












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All of the State health officers who examined the tentative standard tables and replied agreed substantially with the State health department of Tennessee that "uniform tables of this nature should greatly increase the usefulness of the morbidity statistics of the several States." Some of the State health officers referred to depleted appropriations, small office forces, and the necessity for rigid economy. It is evident that under present conditions many States find it impossible to make changes in published reports which will involve additional expense. There is also a natural reluctance to change methods and tabulations which have become routine and which are understood by the office personnel and which are based on reports which local health officers and physicians have been accustomed to submit. In this connection it is gratifying to note that the Alabama State Health Department in its recently published report followed very closely the tentative uniform tables suggested by the Public Health Service.

It is evident that the lists of reportable diseases in the several States could be made much more nearly uniform than they are now, although conditions differ so much that identical lists may not be desirable.

Thirty-one diseases are included in the longer list in the tables as drafted by the Public Health Service. Some States do not receive detailed reports of a number of these diseases; other States receive reports of a number of diseases which are not included in the tables. The State of Tennessee publishes tables listing 49 diseases. For eight of these diseases, however, no case was reported in 1931. It has been suggested that the list of diseases be made shorter, and also that the following diseases be added: Anthrax, beriberi, cancer, favus, glanders, erysipelas, lethargic encephalitis, rabies, and tetanus. Some important diseases, including Asiatic cholera, leprosy, plague, and yellow fever do not appear in the tables as drafted, but obviously should be inserted when cases occur.

The Maryland State Health Department suggests that the diseases be arranged in the order of the International List of Causes of Death instead of alphabetically and that the list numbers be used.

Influenza cases are not notifiable in the two States having the largest population. Diarrhea and enteritis (under 2 years) and puerperal septicemia are notifiable in only a few States, but the State health department of Georgia advises that puerperal septicemia and ophthalmia neonatorum will probably be added to the list of notifiable diseases in that State. Tuberculosis is notifiable in all of the States, but some States do not separate respiratory tuberculosis from other forms.

Cases of notifiable diseases reported in the State of during 193..., by ages

у Ке пириоми								:	:	:						:	:									:		:		
75 years and over									-		:				-	-														
8269 to 74 years		!								-		!					-			:						!		:		
22 to 64 years											:	-								-						!		!	i	
45 to 54 years			-	-					-			-				:				-						-	-	-		
32 to 44 years			j						1	•	-	<u>:</u>			-	-	!			!				-		!	-	-	-	-
30 to 34 Tears		!								i	1				:	:	!			<u> </u>						!	-	-	-	-
25 to 29 years									1	1	:	-			-	-	!			1				-		!	-	:	-	1
20 to 24 lesis		<u> </u>						-	1	1	-	<u>!</u>			-	-	!							-		!	-	-	:	<u>!</u>
12 to 19 years								-	1		-	!			-	-	-			-						!	!	:	-	-
10 to 14 years									1	-	-	-			-	-	!			-	_			-		!	:	:	-	-
9 years								-		-	-	!			-	-	-			-	-			-		:	:	:	-	-
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Бізевзе	Obanerold	Chicken pox	years)	phtheria	Dysontery:	Badillary	German measles	Gonorrhea	Hookworm disease	[nfinenza	Malaria	Measies.	Mumns	Ophthalmia neonatorum	Paratyphoid fever	llagra	Pneumonia (all forms)	Puerneral sentioemia	Rocky Mountain spotted fever (in-	cluding eastern type)	Santia core throat	Small nox	Syphilis		Tuberculosis:	Respiratory.	Other lorms	Tuisracinia	Undulant fever	Whooping cough

(This table can be subdivided to show cases by color or race.)

Cases of notifiable diseases reported in the State of ------- during the year 193--, by months

.... Novem-Decem-ber ber Octo Per c August Septem-----------: ------July ------...... June -----May -----April March : Febru------: --Janu-ary -----------------------------------: ---------Total Typhoid fever Typhoid fever Undulaid fever Whooping cough. Metaira Metaira Meningococcus meningtiis Mumps Optithalia neonatorum Paratyphoid fever Puerperal septicemia Rocky Mountain spotted fever (including eastern type) Scarlet fever Septic sore throat Smallpor Syphilis German measles Hookworm disease Pellagra Pneumonia (ali forms) Poliomyelitis Trachoma. Tuberculosis: Respiratory Disease Diarrhea and enteritis (under 2 years) Bacillary Chicken pox Chancroid.

Cases of notifiable diseases reported in the State of ------ during 193.., by color and sex, with case rates

						-						-						
			Total	8.					White	ite					Colored	red		
	Both 8	sexes	Male	Je	Female	ale	Both sexes	Bexes	Male	el	Female	ale	Both sexes	Sexes	Male	ole	Female	ale
Disease	Num- ber of cases	Cases per 100,000 popu- lation	Num- ber of cases	Cases per 100,000 popu- lation	Num- ber of cases	Cases per 100,000 popu- lation	Num- ber of cases	Cases per 100,000 popu- lation										
Chancroid																		
Diarrhea and enteritis																		
Diphtheria																		
Amebic													-					1
German measles																		
Gonorrhea.																		
Influenza																		
Massles	-	-						-	-	-			-	-	-			
Meningococcus menin-																		
Mumps																		
	-		-	-								-						
Pellagra																		
Pollomvalitie												:	-					
Puerperal septicemia																		
Rocky Mountain spotted fever (including eastern																		
type) Scarlet fever																		
Syphilis																		
Trachoma																		
Tuberculosis: Respiratory																		
Other forms						-		-		-	-							
Tunaraemia Typhoid fever																		1
Typhus fever																		
Undulant leyer Whooping cough																		

Cases of notifiable diseases reported in the State of ------ during 193-., by counties and cities, with case rates

4 4	Cases per 100,900 population	29	8 4 1	367
Whoop ing cough	Number of cases	æ	3, 558 93 93	3,941
er loid	Cases per 100,000 population	37	8-8	11
Typbol fever	Number of cases	8	843	182
s	Cases per 100,000 population	10	282	18
Tubercu losis, other forms	Number of cases	∞	16 175 8	202
atory	Cases per 100,000 population	173	131 158 180	158
Respir	Number of cases	137	1, 275 1, 275 119	1, 695
=	000,001 reg Sesa () noitalingoq	-	000	-
Small	Number of cases	-	000	12
let sr	Cases per 100,000 population	. 22	183 190 518	202
Scarlet fever	Number of cases	8	1,532 342	2, 172
្នុំ ទុំ ន	Cases per 100,000 population	-	=	62
Polio mye- litis	Number of cases	-	182	82
aty- oid	Cases per 100,000 population	7	-66	3
Paraty phoid fever	Number of cases	က	-8-	8
nin- sin- tis	Cases per 100,000 noitalnooq	•	-6100	က
Menin gococ- cus menin gitis	Number of cases	*	191	8
Measles	Cases per 100,000 population	591	828	\$
Mes	Number of cases	467	36 145 45	693
enza	Cases per 100,000 ropulation	1,485	1, 551 831 1, 571	1,008
Influenza	Number of cases	1, 173	1, 939 6, 687 1, 037	10, 836
<u> </u>	Cases per 100,000 population	7	88 741	20
Diph- theria	Number of cases	32	54.79 97.79	755
	Counties and cities	Asron County	groft City) Bancroft City Claremont County	Total for State

This table can be extended to include other diseases.

From the State Health Department of California comes the suggestion that if pneumonia is made reportable, it be divided and separate reports made for broncho-pneumonia, lobar pneumonia, and other forms. However, few, if any, States now collect the data in this form. All of the State health officers who submitted criticisms apparently agreed that a table showing the incidence of notifiable diseases by months is necessary.

Three of the tentative tables as prepared by the Public Health Service called for classifications by age and color. It has been suggested that these three tables be combined in one. The classification by color is deemed essential by health officers in States where a large part of the population is colored. Massachusetts. New York. and Michigan do not consider it necessary to classify by color. However, the colored population of Michigan increased 182 per cent between 1920 and 1930. Negroes now constitute more than 3 per cent of the total population of that State, and they may become numerous enough noticeably to influence case and death rates. California, it appears, is not prepared to give color or sex, but new cards will provide for classification by race to show the incidence of some diseases among Mexicans and Japanese. It is not necessary that all States classify by color and race, but health officers in States having a considerable number of inhabitants of a class which has higher morbidity rates than the average for certain diseases should bear in mind that if only the total figures are published these figures will usually be compared with figures for the white populations in States which classify by color or race.

Two of the tables call for case rates, one table with a classification by sex and the other by political subdivisions of the State. It is evident from the criticisms that the work of computing these rates is a serious problem in many State health departments. Some States compute rates for a few diseases only and some compute rates for the aggregate of rural and urban areas. A possible solution of this problem might be found by adding to the tables a line or a column giving the population data necessary for computing rates. This will enable anyone who has a computing machine, a slide rule, or a table of logarithms to secure easily any rate desired. The Tennessee State Health Department suggests that if rates are published for each county and city a footnote should be inserted cautioning against making comparisons on the basis of rates.

The Massachusetts State Health Department suggests adding to tables calling for classification by sex a heading "sex unknown."

Before requesting this conference to approve uniform or standard tables, it is desired to study further the problem and receive the comment of a number of other State health departments. It will be recalled that last year this conference approved a suggested plan for the proposed morbidity reporting area. The requirements for admission to the morbidity reporting area were as follows:

- (1) The State must be included in the registration area for births and deaths.
 - (2) There must be adequate legislation to enforce reporting.
- (3) There must be machinery for securing reports and keeping records.
 - (4) There must be a clerical force to do the work required.
- (5) There must be willingness to cooperate in efforts to secure more nearly accurate and complete reports of the notifiable diseases.
- (6) The State must secure reports of at least as many cases per death as the average number reported by States in the registration area for deaths for the preceding three years for five diseasesdiphtheria, measles, scarlet fever, typhoid fever, and whooping cough. The average number of cases per death which was used as the standard for comparison was computed on the aggregate numbers of cases and deaths reported by all States in the registration area for deaths and calculated separately for each disease for each year. the conference last year 24 States were rated as standard, that is. above the average number of cases reported for each death, and 21 States were rated as below standard, that is, below the average number of cases reported for each death. For four States data were incomplete; therefore, they could not be rated. The ratings of the States last year as just mentioned were based upon the numbers of cases of the diseases reported for the years 1927, 1928, and 1929. This year similar computations made on the numbers of cases reported for 1928, 1929, and 1930 give the following results:

States rated standard

(Above the average number of cases reported for each death)

1.	California.	10.	Minnesota.	19.	Rhode Island.
2.	Connecticut.	11.	Mississippi.	20.	South Carolina
3.	District of Columbia.	12.	Montana.	21.	Utah.
4.	Illinois.	13.	New Jersey.	22.	Vermont.
5.	Kansas.	14.	New York.	23.	Virginia.
6.	Maine.	15.	North Carolina.	24.	Washington.
7.	Maryland.	16.	Ohio.		Wisconsin.
8.	Massachusetts.	17.	Oregon.	26.	Wyoming.
9.	Michigan.	18.	Pennsylvania.		. •

States vated below standard

(Below the average number of cases reported for each death)

1. Alabama.	8. Idaho.	15. New Hampshire.
2. Arisona.	9. Indiana.	16. North Dakota.
3. Arkansas.	10. Iowa.	17. Oklahoma.
4. Colorado.	11. Kentucky.	18. Tennessee.
5. Delaware.	12. Louisiana.	19. West Virginia.
6. Florida.	13. Missouri.	J
7. Georgia.	14. Nebraska.	

For the following named States comparable data for the three years were not available, as these States were not in the registration area for deaths:

- 1. Nevada.
- 2. New Mexico.
- 3. South Dakota.
- 4. Texas.

It is gratifying to note from these lists that all of the States that were rated as standard last year received that rating this year, and that two additional States have been added to that group, viz, Maine and Montana. It is felt that each year there will be additions of States to the list of those which attain the standard rating. The development of improved reporting of the notifiable diseases is a slow process, but the importance of the ultimate end to be attained justifies our continued and earnest efforts.

BACTERIUM GRANULOSIS CONJUNCTIVITIS COMPARED WITH THAT PRODUCED FROM HUMAN TRACHOMA

TRANSMISSIBILITY OF THE GRANULAR CONDITION INDUCED IN MACACUS RHESUS MONKEYS BY INOCULATION WITH CULTURES OF BACTERIUM GRANULOSIS CONTRASTED WITH THAT INDUCED IN THE SAME SPECIES BY DIRECT TRANSFER FROM HUMAN TRACHOMA

By Ida A. Bengtson, Senior Bacteriologist, National Institute of Health

In an effort to determine the relationship of the form of granular conjunctivitis induced in *Macacus rhesus* monkeys by the inoculation of *Bacterium granulosis* into the conjunctiva of this species with that induced by direct transmission from cases of human trachoma in Missouri in the same species, experiments were undertaken with the following series of monkeys:

Series I: Monkeys in which the granular condition originally induced by the inoculation of cultures of *Bact. granulosis* was thereafter transmitted by transfer of secretion by means of sterile cotton swabs.

Series II: Monkeys in which a granular condition originally induced by repeated swabbings from cases of trachoma in Missouri was

thereafter transmitted by transfer of secretion by means of sterile cotton swabs.

Series III: Four monkeys in which an attempt was made to produce immunity by subcutaneous and intravenous inoculations of killed cultures of *Bact. granulosis*, after which passage of the granular condition from monkeys of Series I was attempted. Four control monkeys, unvaccinated, are included in this series.

Series IV: Four monkeys in which an attempt was made to produce immunity by subcutaneous and intravenous inoculations of killed cultures of *Bact. granulosis*, after which passage of the granular condition from monkeys of Series II was attempted. Four control monkeys are included in this series also.

Series I was started from a single monkey, as recounted in a previous publication (1). A number of attempts with negative results had been made to obtain the granular condition described by Noguchi (2) by means of inoculation with cultures. The strains used had been under cultivation for some time and had been received from the Rockefeller Institute for Medical Research and from Doctors Finnoff and Thygeson. The successful implantation of the culture was accomplished by Dr. Phillips Thygeson, who used a number of strains isolated more recently than those used by the writer.

The condition was continued by passage through six other monkeys, using the method of swabbing a single time. The lesions consisted of rather numerous follicles on the upper and lower lids of both the inoculated and uninoculated eyes, with congestion and hypertrophy of the conjunctiva. In some cases follicles were present on the conjunctiva over the tarsus, though these were smaller and more discrete than those in the fornix. The incubation period was short, congestion of the conjunctiva usually becoming apparent in 7 or 8 days, with follicles appearing a few days later. The condition was definitely active and progressive. The symbol ++++ was used to indicate the degree of activity.

Series II included two monkeys which had been repeatedly swabbed from trachoma cases in the Trachoma Hospital at Rolla, Missouri. A number of earlier attempts (1) had failed to produce lesions sufficiently pronounced to make it seem worth while attempting to continue the condition by passage. The first of the monkeys referred to was swabbed repeatedly during the period January 20–27, 1932. The conjunctiva of the treated eye showed some congestion and a few rather definite follicles in 14 days. The condition progressed slowly until April 22, when definite, rather large follicles were present in the upper and lower lids of the uninoculated eye in sufficient number to make it seem worth while to attempt passage to another monkey (No. 486). This monkey was treated six times with secretion from the first monkey (No. 519). A few follicles developed early, but the

condition progressed slowly, and it was not until about June 1 that the condition appeared very active, at which time there were numerous large succulent follicles on both the upper and lower lids of both eyes. The degree of activity of the condition was recorded as $+++\pm$.

Another monkey (No. 548) was swabbed repeatedly with secretions from a patient at Rolla, Mo., during the period April 4-11. Definite follicles were present on the conjunctiva of the upper lid of the treated eye in about a month. By June 22 the condition had progressed to the extent that the lesions were recorded as + + +. The uninoculated eye remained unaffected.

The monkeys in Series III and IV were inoculated with killed cultures of 6 strains of *Bact. granulosis*, 4 by the subcutaneous route and 4 by the intravenous route. The results were negative in all cases when the sera of the monkeys were tested for agglutinins against suspensions of the organism before the inoculations were begun. Eight weekly inoculations were given, beginning with 0.5 c c of a suspen sion containing approximately one billion organisms per c c and ending with 2 c c of a heavy suspension approximately five times as turbid. The monkeys apparently suffered no ill effects from the inoculations and there was only an occasional slight elevation of temperature.

Thygeson (3) reports that subconjunctival inoculations of a killed culture of Bact. granulosis failed to prevent the development of a granular condition in monkeys when tissue from infected monkeys was inoculated subconjunctivally. In the present work it was thought possible that by the introduction of the vaccine by the intravenous or subcutaneous routes more protection might be afforded. At the same time, by a comparison of the results in the monkeys in which the infection was originally induced by inoculation of cultures of Bact. granulosis and those in which the condition was first induced by direct transfer, it might be possible to obtain some information as to the relationship of the two conditions.

Antibody response as the result of the inoculation of the killed cultures is indicated by the results of the agglutination test, which was as follows:

	Mon-				Seru	m dilu	tions			
	key- No.	1:12.5	1:25	1:50	1:100	1:200	1:400	1:800	1:1600	Con- trol
Intravenous inoculation	518 524 480	3 4	4	3 4	2 4 3	1 2	0 1	000	0	0
Subcutaneous inoculation	524 489 529 527 528	4 4	4	4	3 4 4 2	3 3	1 1	000	0	0
Rabbit immune serum	528 546 264	4	4	2 4 4	4	3 3	3	0 1 1	0	0

Norg.—4 signifies complete agglutination, 3 somewhat less precipitation than 4, 2 about half of the organisms precipitated, 1 slight agglutination.

On June 22 passage of the granular condition induced originally by inoculation with cultures of *Bact. granulosis* was attempted in the monkeys of Series III, using four of the vaccinated monkeys (two vaccinated by the intravenous route and two by the subcutaneous route) and four control monkeys. Passage was made from three of the monkeys in Series I, the method used being that of rubbing a sterile swab over the conjunctival surface of the infected monkey and then over the conjunctival surface of the monkey under test. In this series only one swabbing was practiced.

Passage of the granular condition induced by direct transfer from trachoma cases was made from the two monkeys in Series II (519 and 548) and from 486 which had developed lesions which seemed sufficiently pronounced that positive results might be expected in attempted transmission. In this series, swabbing was practiced as above, except that three swabbings instead of one were used.

On August 25 the results of the tests were recorded as follows:

	Right ey	re Left eye
Vaccinated monkeys:		
518	+++-	+
524) l
528		fl +++
527		++++
Control monkeys (unvaccinated):	4	1
583		++++
590		- '''-
557		+++
587		- -

Series III.—Inoculated from "culture" monkeys

Series IV.—Inoculated from "direct transfer" monkeys (519, 548, 486)

	Right eye	Left eye
Vaccinated monkeys:	 	
489 529	++++ (Died)	+++
264	 (Dieu)	_
Control monkeys (unvaccinated):	-	-
439 549	=	=
598	 = 1	_
	 _	

In Series III, 5 of the monkeys developed lesions in both eyes, 1 died, and 2 were negative. The 2 monkeys in which negative results were obtained were again swabbed (August 25). No. 587 developed lesions recorded as $+ + + \pm$, No. 590 remained negative.

In the direct passage series (IV) 1 monkey developed definite lesions, 1 died, and 6 were negative. Passage to four of those negative has been again attempted, but the results are still negative or only slightly suggestive.

COMMENT

Inasmuch as protection was not afforded against the granular condition in all of the animals in either series, namely, those in which the infection was induced by direct transfer and those in which infection was induced by inoculation with cultures, definite conclusions may not be drawn in regard to the immunological relationship of the two conditions. The results obtained in the monkeys which did not become infected may be explained on the basis of insusceptibility rather than on the basis of immunity. In both series more animals were infected in the vaccinated than in the unvaccinated group. It is very apparent, therefore, that vaccination by the subcutaneous route or by the intravenous route does not protect against either conjunctival infection, even after as many as eight successive inoculations.

Regarding transmissibility, it appears that the condition induced by direct transfer, as indicated by the results obtained thus far, is less readily transmissible than that induced by inoculation with cultures of Bact. granulosis, although more frequent swabbings were made (three swabbings in Series II as compared with one in Series I). Whether this difference is of significance and whether it would be constantly true can not be said without further tests. As to the appearance of the lesions, there were no striking differences, except that the lesions induced by direct transfer of human trachomatous material and by passage thereafter have appeared somewhat less active than those induced by culture inoculation.

The results obtained emphasize the fact that the appearance of the lesions in monkeys can not be used as an accurate criterion to determine whether the condition is one which is the counterpart of that occurring in human trachoma. It might be expected that the direct transfer monkeys would have developed lesions more nearly approaching those of human trachoma, but this was not the case. There was no evidence of pannus or corneal involvement, and the condition appeared not only somewhat less active but at the time of this report it appears that it will be less chronic. The explanation of the different appearance of the lesions in man and animals very probably lies in the greater resistance to the disease on the part of the monkey as compared with that of human beings. Other instances are known in which a disease manifests itself differently in man than it does in animals.

In conclusion it may be said that it is believed that further work along the line suggested may furnish information regarding the problem of the etiological relationship of *Bact. granulosis* to trachoma, for the solution of which some workers have considered human experimentation necessary.

REFERENCES

- (1) Bengtson, Ida A. (1932): Pub. Health Rep., 47, 1914-35.
- (2) Noguchi, H. (1928): Journ. Exper. Med., 48, Supp. No. 2.
- (3) Thygeson, P. (1932): Am. Jour. Ophth., 15, 293-306.

COURT DECISION RELATING TO PUBLIC HEALTH

City held not liable for driving cattle from watershed.—(Colorado Supreme Court; Phillips v. City of Golden, 14 P. (2d) 1013; decided Sept. 19, 1932.) The city of Golden owned several thousand acres of land as a watershed. Some dairy cattle which came upon the city's land were driven off, and the owner of the cattle brought an action for alleged damage to them. The judgment of the lower court in favor of the city was affirmed by the supreme court, which, in its opinion, stated in part as follows:

* * It was not only the right but also the duty of the city to maintain the purity of its water supply for the domestic use of its inhabitants. This proposition is too self-evident to require the citation of authority. We held in Richards v. Sanderson, supra, that parties have the right to drive trespassing cattle from their own unfenced lands, exercising that degree of care to prevent injury that would be ordinarily observed by a prudent person, and there is no evidence in the case now before us that the city did otherwise.

DEATHS DURING WEEK ENDED NOVEMBER 19, 1932

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

	Week ended Nov. 19, 1932	Correspond- ing week, 1931
Data from 85 large cities of the United States: Total deaths Deaths per 1,000 population, annual basis Deaths under 1 year of age per 1,000 estimated live births 1 Deaths per 1,000 population, annual basis, first 46 weeks of year Data from industrial insurance companies: Policies in force Number of death claims. Death claims per 1,000 policies in force, annual rate. Death claims per 1,000 policies, first 46 weeks of year, annual rate	7, 677 11. 0 619 51 11. 0 69, 914, 948 13, 548 10. 1 9. 5	7, 676 11. 1 643 50 11. 8 74, 167, 145 13, 440 9, 4 9, 7

^{1 1932, 81} cities; 1931, 77 cities.

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

Reports for Weeks Ended November 25, 1932, and November 28, 1931

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended November 26, 1932, and November 28, 1931

	Dipt	ntheria	Influ	1enza	Me	asles		gococcus ingitis
Division and State	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931
New England States: Maine New Hampshire Vermont Massachusetts Rhode Island Connecticut Middle Atlantic States:	4 43 6 8	2 9 1 47 12 2	1 2 10	1 1	2 1 1 68	213 10 64 114 155 44	0 0 0 2 0	0 0 0 1 0
New York. New Jersey. Pennsylvania East North Central States:	65 21 108	119 27 98	1 9 14	1 15 12	345 89 246	278 29 365	4 0 4	8 2 5
Ohio	90 85 89 20 3	111 90 140 53 22	6 48 52 3 26	22 9 10 20	143 7 58 230 148	74 19 29 52 16	1 2 12 3 2	1 0 8 1 0
Minnesota Iowa. Missouri North Dakota South Dakota Nebraska Kansas	10 14 46 5 11 22 25	27 21 72 5 4 29 71	2 1 8	16	74 115	8 2 22 38 14 12	1 0 2 0 0 0 2	2 2 1 1 0 0
South Atlantic States: Delaware Maryland ² District of Columbia ³ Virginia West Virginia North Carolina ³ South Carolina Georgia ³ Florida ³	3 12 4 69 62 53 17 49 39	33 82 19 69 116 27 35 10	15 3 55 15 469	9 89 401 36 1	2 3 61 97 51 4	286 15 3 10	0 1 0 1 1 1 0 0	1 1 0 1 2 0 2 0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended November 26, 1932, and November 28, 1931—Continued

	Dipl	atheria	Infi	Jensa	Ме	esles	Menin men	gococcus ingitis
Division and State	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931
East South Central States: Kentucky	107 84 42 24	81 78 84 87	89 160 1,940	29 21	4 3	17 6	1 4 2 0	1 6 0
Arkansas. Louisiana Oklahoma 4 Texas 3 Mountain States:	30 32 53 171	23 49 111 92	111 600 47 73	10 10 34 5	1 1 6 1	1 5 1 11	0 1 0 0	0
Montana	5 15	5 4 14	27 28 	2	138 4 1 6	329 2 1 9	0 0 1 0 9	0 0 0 1 1 2 2
Arizona Utah ¹ Pacific States: Washington Oregon	7 3 8 3	12 1 5	479 146 1 112	2 11 24	1 1 40	31 1	0 1 0 0	2 2 2 0
OregonCalifornia Total	71 1, 648	2,090	6, 306	42 846	2, 001	116 2,414	62	59 59
	Polion	yelitis	Scarle	fever	Sma	llpox	Typhoi	d fever
Division and State	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931
New England States: Maine New Hampshire Vermont Massachusetts Rhode Island Connecticut Middle Atlantic States:	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 1 12 0 3	13 12 7 242 25 64	33 6 4 221 21 44	0	0 0 9 0	4 1 0 2 0	5 0 0 1 0 2
New York	4 1 6	16 9 10	463 156 542	419 106 423	0	36 0 0	13 5 23	15 5 43
Ohio	2 1 3 1 0	1 0 8 5 6	641 93 354 251 68	460 107 235 178 56	2 2 1 0 1	22 10 17 24 1	12 4 11 3 14	14 3 20 5 7
Minnesota Iowa Missouri North Dakota South Dakota Nebraska Kansas	0 0 0 0 0 1	4 11 1 2 0 0	77 41 72 22 8 31 85	44 40 66 10 11 30 57	0 12 0 14 1 2	137 1 6 9 22 11	2 0 4 0 2 0 4	1 2 9 0 2 1
Bouth Atlantic States: Delaware Maryland ² District of Columbia ³ Virginia West Virginia North Carolina ³ South Carolina Georgia ³ Florida ³	0 2 0 3 0 1 1 1	0 2 0 1 2 1 0	3 71 16 84 82 94 14 22 4	9 95 18 73 123 14 29 6	000000000000000000000000000000000000000	0 0 5 0 1 0	0 4 1 21 15 14 5 10	38 14 16 19

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended November 26, 1932, and November 28, 1931—Continued

	Polion	nyelitis	Scarlet fever		Smallpox		Typhoid fever	
Division and State	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931	Week ended Nov. 26, 1932	Week ended Nov. 28, 1931
East South Central States:								
Kentucky	4	1	128	88	0	7	34	34
Tennessee	3	1	59	72	7	2	20	23 22 0
Alabama 3	1	1	46	71	0	0	8	22
Mississippi	0	0	30	39	1	2	1	0
West South Central States:	_	1.		ŀ	1	l		
Arkansas	Q	1	50	23	0	4	5	6
Louisiana	0	1	16	22	1	8	1	11
Oklahoma 4	1	0	53	51	8	1	8	33
Texas 3	0	0	117	39	1	9	8	9
Mountain States:						_	_	_
Montana	0	1	13	18	0 2	1	2	0
Idaho	0	0	0	7	2	0	1	0
Wyoming	0	0	9 27	14	0	8	1	0
Colorado New Mexico	Ö	, v		17	1		7	8
Arizona	ŭ	Ų	5	15	0	Ŏ	1	9
Utah ²	×		12	4 6	C	0	0	0
Pacific States:	U	1	12	0	U	0	0	U
Washington	5	2	24	48	6	20		
Oregon	1	ő	31	19	ő	20 6	8 2	1 2
California	i	2	159	122	2	14	9	10
ANTIAL TITA			109	122		14		10
Total	43	108	4, 440	3, 612	66	388	291	411

SUMMARY OF MONTHLY REPORTS FROM STATES

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

State	Me- ningo- coccus menin- gitis	Diph- theria	Influ- enza	Malaria	Measles	Pel- lagra	Polio- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
October, 1933										
California	8	240	1,075	9	115	2	16	400	14	46
Idaho		25	11		2		3	25	24	10
Indiana	27	404	122		41		7	471	3	96 17
Kansas	5	155	10	1	24		6	376	3	17
Missouri	10	450	13	10	41	1		546	0	106
New Mexico		79	71	6	3	2	1	59	Ō	54
Oklahoma 1	4	485	127	159	7	10	3	177	Ă	54 127
Oregon	ĭ	9	283	27	88	-ĭ	7	80	5	18
South Dakota	ī	17	2		5	-	i	60	2	10
Texas	-	847	221	856		6	18	309	-	18 10 11
Virginia	2	342	221	35	169	16	13	382		111
Washington		18	100	35	28	10			.0	111 27
AA GOUTTE MOTITION OF THE PERSON OF THE PERS		19	106		28		21	109	14	27

¹ Exclusive of Oklahoma City and Tulsa.

New York City only.
 Week ended Friday.
 Typhus fever, week ended Nov. 26, 1932, 22 cases: 1 case in District of Columbia, 1 case in North Caroalina, 6 cases in Georgia, 2 cases in Florida, 3 cases in Alabama, and 9 cases in Texas.
 Figures for 1932 are exclusive of Oklahoma City and Tulsa.

October, 1932		Lethargic encephalitis: California	Cases	Septic sore throat—Con. C Missouri	ases
Actinomycosis: Ca	ses	Indiana	- ĭ	Oklahoma 1	32
California	1	Oregon	īi	Oregon.	. 3
Kansas	î	Mumps:		Virginia.	. 16
			350	Tetanus:	. 10
Anthrax:	_	California			_
California	2	Idaho	- 94	California	
Missouri	1	Indiana	_ 47	Kansas	. 1
South Dakota	1	Kansas	_ 95	Virginia	. 1
Chicken pox:		Missouri	_ 53	Washington	. 1
	556	New Mexico	_ 4	Trachoma:	
Idaho	87	Oklahoma 1	_ 10	California	. 7
	306	Oregon		Indiana	5
	262	South Dakota		Oklahoma 1	7
Missouri		Washington		South Dakota	25
	30		- 91		
New Mexico		Opthalmia neonatorum:		Virginia	. 2
Oklahoma 1	18	Ca.ifornia	- 4	Trichinosis:	_
Oregon	82	Indiana	_ 1	California	. 1
South Dakota		New Mexico	. 2	South Dakota	1
Virginia	90	Oregon	. 1	Tularaemia:	
Washington	303	Virginia		Missouri	2
Conjunctivitis:	-	Paratyphoid fever:	-	Virginia	ī
New Mexico	3	California	. 2	Typhus fever:	•
		Vences	ī		3
Diarrhea and dysentery:	~~=	Kansas		Virginia	0
Virginia	207	New Mexico		Undulant fever:	_
Dysentery:	_	Texas	. 11	California	7
California (amebic)	8	Virginia	. 15	Indiana	6
California (bacillary)	37	Washington	. 1	Kansas	5
Oklahoma i	12	Psittacosis:		Missouri	18
Oregon	2	California	. 3	Oregon	1
Food poisoning:	- 1	Puerperal septicemia:		Virginia	8
California	92	New Mexico	. 1	Washington	ĭ
New Mexico	ĩ	Rabies in animals:		Vincent's angina:	•
	- 1	California.			
German measles:		California	. 20	Kansas	3
California	30	Missouri	. 4	Oklahema 1	3
Indiana	2	Washington	. 7	Oregon	17
Kansas	1	Rabies in man:		Whooping cough:	
New Mexico	1	California	. 1	California	668
Washington	13	Relapsing fever:	_	Indiana	64
Granuloma, coccidioidal:		California	. 1	Kansas	
California	3	Scabies:		Missouri	88
	١٠	Oblohoma 1	. 4	New Mexico	23
Impetigo contagiosa:		Oklahoma 1	1	Oblahama 1	
Kansas	12	Oregon.	91	Oklahoma 1	8
Oregon	122	Septic sore throat:	_ 1	Oregon	30
Washington	3	California		South Dakota	19
Leprosy:	- 1	Idaho	. 1	Virginia	234
California	1	Kansas	3	Washington	41
	- •		- 1		

¹ Exclusive of Oklahoma City and Tulsa.

WEEKLY REPORTS FROM CITIES

City reports for week ended November 19, 1932

	Diph-	Infl	uenza	Mea-	Pneu-	Scarlet	Small-	Tuber-	Ту-	Whoop-	Deaths,
State and city	theria cases	Cases	Deaths	sles cases	monia deaths	fever cases	pox cases	culosis deaths	phoid fever cases	ing cough cases	all causes
Maine: Portland New Hampshire:	0		0	0	3	3	0	0	0	3	17
Concord Nashua Vermont:	0		0	0	1 0	0 1	0	0	0	0 0	6
Barre	0		0	0	0	0	0	1	0	0	8
Boston Fall River Springfield Worcester	8 0 0 8	1	0	38 0 0	28 0 0	52 4 5	0	3 2 5	0 0 0	50 1 1	183 29 32
Rhode Island: Pawtucket Providence	0 2		0	0	2 0 2	15 0 13	0	0 3	0	9	43 19
Connecticut: Bridgeport Hartford	0 2	4	0	9	2 2 2 3	6	0	3	0	7 5	65 41
New Haven	1	i	ŏ	ŏ	3	2	0	1	0	8	29 55
Buffalo New York Rochester Syracuse	1 47 22 0	18	0 7 0	153 1	15 105 5 9	29 111 19 12	0 2 0	6 60 1 0	0 8 0	17 71 5	120 1, 326 71 53

City reports for week ended November 19, 1932-Continued

	1	T		1	T		Ι	Γ	Γ	<u> </u>	Т
State and city	Diph- theris		uenza	Mea- sles	monia	Scarlet fever	pex	culosis	Ty- phoid fever	Whoop- ing cough	all
	cases	Cases	Deaths	C8S6S	deaths	cases	cases	deaths	cases	cases	causes
New Jersey:											
Camden	6		0	1 40	2 3	2	0	4	0	1	44
Newark Trenton	lö	13	lö	10	8	7 9	0	6	1	9	92 45
Pennsylvania:	-							1 -		-	l
Philadelphia Pittsburgh	5 11	4	0	5 2	29 10	80 43	0	33	2 1	9 12	478 142
Reading	8		Ō	11	ı	2	ŏ	ĭ	ō	3	29
Ohio:		1									1
Cincinnati	3		O O	0	10	16	0	9	0	3	113
Cleveland Columbus	10 6	113	4 2	1 51	10 2	80 12	0	10	2	15 7	181 86
Toledo	, š		ő	7	3	37	ŏ	2	ŏ	2	57
Indiana: Fort Wayne	0		0	0	2	3	0	o	0	0	14
Indianapolis	2		Ó	1	14	6	ŏ	3	1	ŏ	
South Bend	0		0	0 1	3 2	9 7	0	1	0	6	16
Terre Haute Illinois:	U		0	1	2	'	1	1	0	ا	23
Chicago	23	6	3	40	36	166	0	33	3	22	618
Springfield Michigan:	4	1	0	0	0	14	0	.1	0	0	18
Detroit	17	2	2	42	18	93	0	17	1	86	237
Flint Grand Rapids	2 0	21	0	2 0	2 2	5 5	0	0	0	7 5	18 29
Wisconsin:					1 1				- 1	1	
Kenosha Madison	0		0	1 1	0	3 0	0	0	0	3 1	9
Milwaukee	4	2	2	8	8	16	0	3	1	34	105
Racine Superior	2 0		0	0	1 3	2 0	0	0	0	6	9 12
- i	Ū		١	٠	١	١	٥	١	١	١	12
Minnesota: Duluth	1		o	2	4	o	o	0	0	0	14
Minneapolis	4		i	15	6	11	ŏ	5	ĭ	9	95
St. PaulIowa:	0		0	0	5	23	Ó	2	0	13	57
Des Moines	6			0		7	0		0	0	24
Sioux City	1			0		1	0		0	0	
Waterloo Missouri:	0			0		0	0		0	1	
Kansas City	1		0	10	7	15	0	4	0	0	86
St. Joseph St. Louis	10 24		0	0	9	17	0	9	0	0	30 199
North Dakota:			-	- 1		- 1	- 1	i	1		
Fargo Grand Forks	0		0	0 19	0	1 0	0	0	0	0	7
Nebraska:	-		1	1	١	- 1		١		1	
LincolnOmaha	1 16			0 2	4	20	0	<u>2</u>	0	0	40
Kansas:			- 1	j	- 1	1	- 1				
Topeka Wichita	2		8	5	3	3 5	0	0	0	0	13 30
į	- 1		١	١	۱.	١	١	١	١	١	00
Delaware: Wilmington	0	i	0	o	0	0	o	1	0	3	26
Maryland:	1			- 1	- 1	1	1	- 1		- 1	
Baltimore Cumberland	8	7 0	3 0	3 0	21	39	0	10	3	18	207 10
Frederick											
District of Col.:				!		7	ام	16	6	12	131
Washington Virginia:	3	3	1	1	10	1	0	10	١	12	
Lynchburg	3		0	0	1	1	0	0	0	1	13
Richmond Roanoke	5		1 0	0	4	8	0	3	3	0	48 8
West Virginia:			- 1	1	1	1	- 1	1	1	- 1	
Charleston Huntington	9		0	13	1 0	3 15	0	1 0	0	3	12
Wheeling	ő		ŏ	68	ĭ	ĭ	ŏ	ŏ	ŏ	5	19
North Carolina: Raleigh	1	l	0	o	0	5	0	0	0	اه	17
Wilmington	1 .		0	ŏ	1	1	0	0	Ó	0	10
Winston-Salem South Carolina:	3 .		Ó	1	1	7	0	0	0	4	9
Charleston	1	6	1	0	o	o	0	1	1	0	21
Columbia Greenville	1 .		Ō	0	2	2	0	0	0	0	14
Greenville	0 1.			0 1.	1	1 /	0 1.		0 1	0 -	

City reports for week ended November 19, 1932—Continued

Georgia:		Diph-	1	luenza	Mea-	Pneu-	Scarlet		Tuber-	Ty- phoid	Whooping	Deaths,
Atlanta	State and city	theria cases		Deaths	sles cases	monia deaths	fever cases	pox cases	culosis deaths	fever	ing cough cases	causes
Florida: Miami.	Atlanta	16	1	0	0	12	14	0	5	0		77
Florida: Miami.	Brunswick	1		. 0	0	0	0	Ó	0	0	0	77 2 31
Mismi	Savannan	3	3	1	0	2	2	0	1	1	0	31
Tampa		0	1	0	0	0	0	0	ا ما	0	0	22
Covington	Tampa	4		Ō	Ō		1	Ŏ		0	i	23
Covington	Kentucky:	Ì									1	1
Louisville	Covington										 -	
Tennessee: Memphis	Lexington					2	3				0	12
Memphis		10	Z	0	0	4	14	0	6	0	3	78
Nashville		14		0	1	3	5	0	5	4	0	76
Birmingham		0		2		4			5			55
Mobile										_		
Montgomery			4									65 22
Arkansas: Fort Smith			1			1			١			22
Fort Smith			I -		-		_			•	•	
Little Rock			l	ا ا	_		_			_	_	1
Louisiana: New Orleans 12 8 5 0 6 12 0 12 2 0 0 1 0 0 0 0 0 0 0												
New Orleans				ا ا	U	ا	•	U	- 1	١	•	
Oklahoma: Muskogee 0 0 0 0 1 0	New Orleans	12	8	5	0	6	12	0	12		0	159
Muskogee 0 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 0 0 1 0<	Shreveport	1		0	0	0	1	0	0	0	0	31
Tulsa	Wuskogea	٥		ا م	•		, ,		اما	ام		
Teras:	Tulsa											
Fort Worth	Texas:	_						- 1		- 1	_	
Galveston	Dallas					4						63
Houston	Galveston	Ď			1						V	3 <u>4</u> 7
Montana: Billings 0	Houston											85
Billings	San Antonio						ō					57
Billings	Montana:					1 1	1		l	ı		
Great Falls	Billings	0		0	0	ا ه	0	0	0	ol	0	8
Missoula 0<	Great Falls											
Idaho:	Helena											5 2
Boise	Idaho.	١٧		U	0	0	0	0	0	0	١٥	. 2
Colorado: Denver	Boise	0		8	1	ا ه	0		0	اه	اه	1
Pueblo New Mexico: 0 0 0 0 1 0 0 3 0 0 1 0 3 0 0 1 0 3 0 0 1 0 3 0 0 1 0 3 0 0 1 0	Colorado:	1				1	ł	- 1	- 1		1	
New Mexico: Albuquerque 1 2 3 1 1 1 0 3 0 0 1 Arizona: Phoenix 0 4 0 3 0 0 2 0 0 Usah: Salt Lake City 0 0 0 3 2 0 0 0 0 0 0 Nevada: 8 8 8 8 8 8 8 8 9 0	Denver											80
Albuquerque	New Mexico:	٠		U	U	ا ۱	1	0	0	3	١٥١	6
Arizona:		1	2	3	1	1	1	ol	3	0	ol	12
Utah: Salt Lake City 0 0 0 3 2 0 0 0 0 Nevada: Reno 0	Arizona:	_ [1	- 1	1	Ĭ		
Salt Lake City 0 0 0 3 2 0 0 0 0 Nevada: 0 0 0 0 1 0 0 0 0 Washington: Seattle 1 0 12 0 1 2 1 Spokane 0 0 2 1 0 0 0 0 0 Tacoma 0 1 1 1 3 0 0 0 0 0 Oregon: 0 2 2 0 1 6 10 0 0 0 0 0 Salem 0 0 0 0 0 0 0 0 0	Phoenix	0		4	0	3	0	0	2	0	. 0	
Nevada: Reno	Salt Lake City	0		0	0	2	او			ام		35
Washington: 1 Seattle	Nevada:	- 1		٠,	•		- !	١	٠į	٠,	٠,	•
Seattle	Reno	0		0	0	0	1	0	0	0	0	3
Seattle	Washington:	i	1	i			- 1	i		l	}	
Spokane 0 1 1 1 0 </td <td>Seattle</td> <td>1</td> <td></td> <td></td> <td>0</td> <td></td> <td>12</td> <td>0</td> <td>1</td> <td>٠,١</td> <td>2</td> <td></td>	Seattle	1			0		12	0	1	٠,١	2	
Tacoma 0 1 1 1 3 0 0 0 3 2 Oregon: Portland 2 2 0 1 6 10 0 0 0 7 Salem 0 2 2 0 2 0 0 0 0 0 0 0	Spokane	0			2					ō	ō	
Portland 2 2 0 1 6 10 0 0 0 7 Salem	Tacoma	0		1	1	1	3		0	Ò		26
Salem	Portland	او	او	ام	,	اما	10	ام	ام	ام	اہ	74
California:	Salem					0			יי			74
	California:	1		1	- 1		١	٠			٠,	
Los Angeles 28 323 7 16 15 52 0 29 0 19 30 Sacramento 0 10 0 2 5 3 0 3 0 10 2	Los Angeles			7	16							301
			67		2	5			8			26 146
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City reports for week ended November 19, 1932—Continued

State and city	Meningococcus meningitis		Polio- mye- litis	State and city		gococcus ngitis	mye- litis
•	Cases	Deaths	cases		Cases	Deaths	cases
Connecticut: Bridgeport	1	0	0	Kansas: Topeka	0	1	0
New York: Buffalo New York	1 4	0	0 2	District of Columbia: Washington Virginia:	1	0	0
Rochester Pennsylvania: Philadelphia Pittsburgh	1 0	0 1 0	0 8 1	Richmond	0	0	1
Ohio: Cleveland Columbus	1 0	1	o O	Louisiana: New Orleans	0	0	2
ToledoIndiana: Indianapolis	0	0 1 0	0 1	Washington: Seattle California:	0	0	1
Illinois: Chicago Michigan:	12	2	0	Los Angeles San Francisco	0	1 0	0
DetroitFlint	1	0	0				

Lethargic encephalitis.—Cases: Pittsburgh, 1; Detroit, 2; Atlanta, 1. Pellagra.—Cases: Wilmington, 1; Atlanta, 1; Birmingham, 3. Tyrhus fever.—Cases: Baltimore, 1; Savannah, 3.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended November 12, 1932.—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases for the week ended November 12, 1932, as follows:

Disease	Prince Edward Island	Nova Sco- tia	New Bruns- wick	Que- bec	Onta- rio	Mani- toba	Sas- katch- ewan	Al- berta	British Col- umbia	Total
Cerebrospinal meningitis_ Chicken pox Diphtheria Erysipelas	1	23 5	1 2	1 71 38	1 272 13 1	53 5 3	15 1	4 3	1 65 3 1	3 504 71 5
Influenza Lethargic encephalitis Measles Mumps Paratyphoid fever		27 3	3	118	16 1 323 81 2	9 5		37	242 15	288 1 508 86 2
Pneumonia Poliomyelitis Scarlet fever Smallpox Trachoma	i	1 4	2 5	5 76	4 5 86	16 1	11	1 7	12 28	17 13 234
Tuberculosis	1 3	2 1	2 4	73 45 134	20 11 4 78	8 11 37	4	2 4 2	3 8 1 29	116 80 4 284

GREAT BRITAIN

Scotland—Vital statistics—Quarter ended September 30, 1932.—The Registrar General of Scotland has published the following statistics for the third quarter of the year 1932:

Population (provisional) Births Birth rate per 1,000 population Deaths Death rate per 1,000 population Marriages Deaths under 1 year Deaths under 1 year per 1,000 births Deaths from— Bronchitis Broncho-pneumonia Cancer Cerebrospinal fever Diabetes Diphtheria Dysentery Erysipelas	1, 880, 000 22, 030 18. 0 13, 191 10. 8 9, 343 1, 397 63 396 313 1, 897 41 143 69 4 25	Deaths from—Continued. Heart disease. Influenza. Lethargic encephalitis. Measles. Nephritis, acute. Nephritis, chronic. Paratyphoid fevers. Pneumonia. Poliomyelitis. Puerperal sepsis. Scarlet fever. Syphilis. Tetanus. Tuberculosis. Typhoid fever. Whooping cough.	2, 096 54 15 35 49 228 6 291 2 35 41 29 5 852 7
rysipelas	25	whooping cough	73

(2294)

YUGOSLAVIA

Communicable diseases—October, 1932.—During the month of October, 1932, certain communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	150 4 1, 675 805 174 388	15 1 144 84 6 6	Paratyphoid fever Poliomyelitis Scarlet fever Sepsis. Tetanus Typhoid fever	94 63 679 12 38 1, 805	5 9 24 3 17 139

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

(Note.—A table giving current information of the world prevalence of the quarantinable diseases appeared in the Public Health Reports for November 25, 1932, pp. 2231-2244. A similar cumulative table will appear in the Public Health Reports to be issued December 30, 1932, and thereafter, at least for the time being, in the issue published on the last Friday of each month.)

Cholera

Philippine Islands.—During the week ended November 26, 1932, 35 cases of cholera with 26 deaths were reported in the Province of Samar, Philippine Islands.

Plague

Argentina.—On November 10, 1932, 4 deaths from plague were reported in the Province of Rioja, Argentina.

Hawaii Territory.—On November 14, 1932, a plague-infected rat was found in Paauilo, in the interior of Hamakua District, island of Hawaii. The location is about 175 miles from Honolulu which is on the island of Oahu.

On vessel.—Three members of the crew of the Greek S. S. Patris, suffering from plague, were removed November 8, 1932, at Beirut, Syria.

Yellow Fever

Brazil.—Deaths from yellow fever have been reported in Brazil as follows: State of Ceara, 1 death July 26, 1932; 1 death September 14. State of Pernambuco, 1 death August 5, and 1 death September 4.