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MORTALITY FROM CERTAIN CAUSES DURING THE FIRST HALF OF 1936 1

This report presents mortality data for 21 States, the District of Columbia, and Hawaii for the first half of 1936, with comparative data for recent years. In addition to the death rate from all causes, rates are shown for 17 specific causes, 4 groups of causes, and for infant and maternal mortality.

The rates are computed from current and generally preliminary reports furnished by State departments of health. Because of some lack of uniformity in the method of classifying deaths according to cause, some delayed death certificates, and various other reasons, these preliminary rates cannot be expected to agree in all instances with final rates published by the Bureau of the Census. The final figures are based on a complete review and retabulation of the individual death certificates from each State. The preliminary rates given in the accompanying table are intended to serve as a current index of mortality until final figures are available.

The populations used for 1934 and 1935 are the official estimates as published by the United States Bureau of the Census on May 11, 1936. These estimates are corrected to agree with the population of the United States as computed from births, deaths, immigration, and emigration since the 1930 census. Since no estimates have been prepared for States for 1936, the figures used are an extrapolation from the official 1935 estimates, with the same annual increment as that used by the Bureau of the Census for the year 1935 as compared with 1934. Populations for 1933 were estimated by making the increment for 1934 over 1933 the same as that used by the Census Bureau for 1935 as compared with 1934.

At the top of the table, rates are given for a group of 22 2 States with an estimated population of 70,000,000 that have data available for the first 6 months of each of the 4 years 1933-36. For individual States, data are shown for the first 6 months or for as many of those months as are now available, with rates for corresponding periods of 2 preceding years. Comparisons made below refer only to the 22 States with complete data.

¹ From the Office of Statistical Investigations, U. S. Public Health Service.

^{*} See footnote to table for States included.

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The death rate from all causes for the first half of 1936 was 11.9 per 1,000 (annual basis), as compared with 11.4, 11.5, and 11.1 in the first 6 months of 1935, 1934, and 1933, respectively. In 19 of the 22 States the rate was higher in the first half of 1936 than in the same half of 1935. In both the first and second quarters of 1936 the rates exceeded those for the corresponding periods in the 3 preceding years.

The relatively high mortality from all causes is largely accounted for by the increased mortality from influenza and pneumonia during the first half of 1936. Mortality from influenza and pneumonia was slightly higher in the first half of 1936 than in the same period of 1935 and 1933, and markedly higher than in 1934, a year of low influenza and pneumonia mortality. Rates for pneumonia were higher in both the first and second quarters of 1936 than they were in corresponding periods of the 3 years immediately preceding; 18 of the 22 States showed an increase over the first half of last year and 4 a decrease. Mortality from influenza was higher in the first half of 1936 than in either 1935 or 1934 for the same period; only 8 of the 22 States, however, reported higher rates than in the same period of 1935. During the first quarter of 1936 reported mortality from influenza was lower than last year, and during the second quarter it was higher than in any of the 3 preceding years. The minor epidemic of influenza 3 in the winter of 1935-36 was most severe in the southwestern section of the country and extended over a period of approximately 4 months, from January to April, inclusive.

Infant mortality in this period was the lowest it has been in recent years. Among 22 States with complete data, 19 had lower rates and 3 had higher rates in the first half of 1936 than in the same months of 1935.

The mortality rate from meningitis was definitely higher during the first 6 months of 1936 than during the corresponding period in each of the 3 preceding years; 15 of the 22 States had a higher rate than in 1935. The incidence of meningitis has stood at a relatively high level since the latter part of 1934. States showing the greatest increases in 1936 over 1935 in the death rate were those located in regions along the Atlantic coast and the South Central region. Scarlet fever was exceptionally high during 1935 and in the early part of 1936; the rate for the first 6 months of each year was 3.1 per 100,000 as compared with 2.8 for the corresponding period in the years 1934 and 1933.

Heart diseases, nephritis, cerebral hemorrhage, cancer, and diabetes showed increases over recent years. The rise was particularly significant in heart diseases, which showed an increase of about 9 percent

³ See Gover, Mary: Influenza Mortality in the United States, 1936. Public Health Reports, Oct₈ 9, 1936, p. 1399.

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over the 1935 rate, as compared with less than 1 percent in 1935 over 1934; the increase for this period in 1934 over 1933 was approximately 10 percent. The 1936 rise was quite general; 20 of the 22 States having a higher rate and only 2 showing a decrease. Nineteen States reported an increase in cerebral hemorrhage and diabetes and 14 an increase in cancer.

The death rates from measles and whooping cough were considerably below those for the 3 preceding years. In 1935 and 1934 both of these diseases were unusually prevalent. The typhoid rate (0.9 per 100,000) was the lowest for this period in the 4 years under review. The diarrhea and enteritis rate was also the lowest in recent years. Diphtheria continued to decline, with a rate of 1.7 per 100,000, as compared with 1.9 for the corresponding period in each of the 3 preceding years.

The steady decline of tuberculosis was uninterrupted; 17 of the States participated in the decline from the 1935 level and 5 showed an increase.

Mortality from certain causes in the first 6 months of 1936, with comparative data for the corresponding period in preceding years

		Mephritis (130-132)		88.89.09.89 6.4.6.80	28.2.2 20.2.2 20.2.2	26.28.28.28. 0 × 2.1.		8 2.	8.8.2 8.40	8 2 8 400
		Diarrbes and enteritis, under 2 years (119)	İ	7.10	4.4.10.10. 0.8000	5.7.5 9.33 1.13		13.2	44.0	41% 935
		Diseases of the diges- 1706 aystem (115-129)		8888	25.83.12 21.00	20.00 8.40.00		5.7	88.95 1.80.80	999
		Pneumonia, all forms (107-701)		115.1 105.5 101.4 86.3	142.9 127.2 121.6	83.8 81.8 81.0		139.1	113. 1 97. 6 91. 3	888 88.4
•		Diseases of the respir- atory system (104- 114)		128.6 119.4 115.9 99.1	158. 5 141. 4 137. 0 125. 6	98.7 97.7 72.9		148.9	128.5 111.2 106.6	999
		Diseases of the beart (90-95)		283. 9 267. 6 239. 2	311.7 279.8 281.1 263.8	255.3 255.3 24.7		152. 2	406. 1 376. 5 338. 2	247. 1 243. 6 234. 3
	sastis)	Diseases of the circula- tory system (90-103)		219. 5 293. 0 272. 3	338.5 306.4 316.0	200.5 273.9 280.7 256.2		167.4	448.8 428.6 831.7	555
.	l lenan	Cerebral hemorrhage, apoplexy (82a, b)		91. 9 86. 2 81. 1	97.2 89.7.2 85.5	88.6 77.7 76.7		89.3	101.00 0.14.00	<u> </u>
	Death rate per 100,000 population (annual basis	Diseases of the nerv- ous system (78–89)		113. 0 108. 3 104. 1 105. 3	119.3 111.3 108.8 110.3	106.8 105.3 100.2		8,	128.0 128.4 117.8	333
	opulat	(et.) sətədaid		2.53.52 0.0000	20.22 20.23 20.20 20.20	##		12.6	88.88 8.55 5.55	32.0
٠	000'00	Cancer, all forms (45-53)		114.3 112.0 109.9 105.6	113.8 100.6 107.9 105.4	114. 7 114. 4 111. 6 105. 9		56.1	151.8 147.9 136.9	128.7 118.9
	9 per 1(Tuberculosis, all forms (23-32)		53.8 55.0 56.1 59.1	55.78 55.00 50.00	53.8 55.1 59.2		88.2	89.6 82.1 93.8	40.6 47.3 45.6
	th rat	Meningococcus menin- gitis (18)		82411 2404	8.24.1.1. 4.8.0.0.0	9999			1.23	113
	Dea	Lethargic encephalitis (17)		0	6661	81.81.		-:	Ø.65.	ώ.π.
		Poliomyelitis (16)		0	uidie	-: 0.4:0.		*:		3:1
•		Influenza (11)		29.6 28.9 19.7 37.6	36.6 43.9 27.1 62.8	22.6 14.0 12.3 12.1		82. 2	26.82 4.73 8.03	4.6.0
.		Diphtheria (10)		1111	4456	11111		2.7	444 980	थं छं ₹
		(e) Agues gaiqeed W		0444 040	98.49 0012	1.9 5.0 7.2		9. 9.	1.1 3.4	11.2
		Scarlet fever (8)			00000000000000000000000000000000000000	0000 0000		٠.	1.5	8.00
		Measles (7)		2.6	. 9 5.7 1.9	1.1 6.1 3.5		1.2	κο . ει ει ο ο	. w.
•		Typhoid (ever (1, 2)		0.9 1.0 1.3	8.0.0.5	11.20		œ.	e.	-:
	,000, sd	Maternal mortality		5.6 6.1 6.1	8000 800 800 800 800	, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20		6.5	5.1 1.6 1.0	4.7.7.
	Rate per 1,000 live births	All except malforms- tions and early infancy		2822	3837	នននេត	•	45	ន្តន្តន	<u> </u>
	Rate	Total infant mortality		55 58 61 60	8828	8482		7	조조茲	44 55
	s) nđođ (All causes, rate per 1,000		11.11.12.4.20.15.4.15.11.15.15	12.6 11.9 11.8	10.9		11.6	14. 6 13. 8 12. 3	10.9
		State and period	22 STATES 1	January to June— 1936 1936 1936 1934 January to March—	1936 1935 1934 1934 1931	1936 1936 1934 1933	JANUARY TO JUNE	Alabama: 1936. California:	1936 1935 1934 Compactient	1936 1935 1934

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174.8 171.4 145.1	88.3 80.0 80.0	135.6 103.5 114.3	73.6 72.1 159.9	130.2 115.8 121.1	100.5 98.2 91.1	132.1	113.2 115.2 120.3	120.9 117.4 75.9	150.8 97.5 83.4	0 143.5 8 139.1 3 130.8
193. 4 188. 8 164. 6	121. 5 95. 7 103. 9	145.7 112.2 124.1	87.0 83.0 176.9	148.9 132.6 135.1	114.1 109.3 102.2	ତତତ	2 123.6 1 127.4 2 137.9	5 131.3 2 129.2 2 85.8	22 165.5 7 109.7 96.7	3 157.0 9 151.8 1 145.3
365. 4 359. 2 381. 0	257.7 228.3 234.8	158.1 142.3 147.6	127.9 111.5 100.1	193. 6 162. 5 169. 3	331.0 288.6 285.4	283.5 286.8	267.2 220.1 220.1	263. 5 6 239. 5 1 217. 2	4 215.2 8 181.3 197.7	298.5 291.1
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146.3 128.7 133.6	133.9 123.2 129.9	97.3 94.6 9.6	63.0 61.2 56.4	111.1 91.8 107.9	103.1 103.4	999	4 147.5 4 154.1	25.5	888	8 143. 6 135.
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¹ States included are Connecticut, District of Columbia, Georgia, Idaho, Illinois, Indiana, Kansas, Louisiana, Maryland, Michigan, Minnesota, Montana, Nebraska, New Jersey, New York, Pennsylvania, Rhode Island, South Dakota, Tennessee, Virginia, West Virginia, and Wisconsin (estimated population as of July 1, 1936, 70,188,000). Includes all of the States with available data for the 4 virginia data py this summary. For a few causes, 1 to 3 States were omitted because of missing data for the 4 plants, and warehouly.

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g yea		Pneumonia, all forms (901-701)		118.2 109.3	100.7 97.8 96.2	102 86.3 86.0	140.2 156.8 98.3	85.1.1.92 0.4.54	86 88 88 50 73 7- 80 80	117.9 110.8 115.5
cedin		Diseases of the respir- atory system (194- (411		132.8 123.7 116.0	113.4 108.9 110.5	112 72.8 87.8	168. 5 172. 0 114. 7	103. 1 130. 5 106. 0	99.5 90.7 97.2	812181 111
in the first 6 months of 1936, with comparative data for the corresponding period in preceding years—Continued		Diseases of the beart (39-09)		25.7.5 20.7.5 27.7.5	250.7 219.2 227.3	140 109.3 104.8	198. 4 211. 2 188. 7	247. 1 198. 8 190. 0	315. 6 302. 0 308. 7	375 24.03 8.03 8.03
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ng pe	nual t	Corebral hemorrhage, apoplexy (82a, b)	-	101. 85.99 8.4.8	2.22 2.22 2.02 2.03	\$24 010	81.8 81.8	105.9 101.4	86.0 4.0 4.0 8.7	88 84 2 2 2 2
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orresi	opulat	(63) sətədai (I		847.55 4.8.15	223	11.6 10.8 8.3	\$2 200	22.27	25 25 25 25 25 25 25 25 25	85.55 11.55
the c	1 000'00	Cancer, all forms (45-58)		116.3 113.5 110.4	120 130.2 120.8	59. 7 57. 7 52. 2	8529 2854	112, 2 102, 5 114, 0	25.02 12.03 12.03 12.03 13.03	145. 139.9
ta for	Desth rate per 100,000 population (annual besis)	Tuberculosis, all forms (23-32)		45. 50. 1.03	36.2 36.8 20.8	61.0 53.3	45.00 204	04.24.24 0.80.00	52.0 56.2 56.2	63.45
e da		Meningococcus mental- gitis (18)		91.1	849	526	46.1	~;4;-; ∞ ∞ ८4	4000	9.00 0.00
rativ		Lethargic encephaltisis (17)		<u>စ်မယ့်</u>	 604	44,00	€-:-: 12	966	00 CO	-04
mpa		Poliomyvlitis (16)			क्षंचल	44.00	€ <u>,</u> €		9999	€
th ce		(II) szneudał		18.33 18.00 19.00	8,4,6; 1,8,4	25.28 27.08	8934 904	283	11.3 8.7-1	ල වූ ල ව
3, w		(01) girbdtdqiQi		1.1	2.00	4000	0.00 cg	1111	204	400
1936		Whooping cough (9)		40 to	1.6.4 0.40	40 % 87 %	46%	90 54 P	-: 01 -: 00 00 0	-i:::-i
hs of		Scarlet fever (8)		888 888	ا۔ 4∞ت	çi a w	44.6.6. 0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	ფ.ლ. 4.ივ	2110	8601 8601
non		(7) sələsəM		7.5	1.4.0; 81.0	2.1 1.6 27.6	€7.5 2.8	1.5 4.4	.0104 44-0	12:2
t 6 1		Typhoid fever (1, 2)		0 50 03	بن در ه	950 950 950 950	111	r-04	10.04	044
e firs	000,1	Maternal mortality		ವಳುಗ 4400	4.5.5 7.00	EEE	က်က်တ် လ <i>ပ</i> ာလ	තුවා තු නගෙන	44.0	045 045
in th	per 1,000 births	All except malformas- tions and early infancy		ន្តន្តន	383	<u> ೨</u>	999	52.83	99 9	288
	Rate p	Total infant mortality		282	483	SSS	283	44 8	85.55 52.55	823
can	(s -ndod (All causes, rate per 1,000		12.1	0.00 8 4 9 0.00	2010 10.3 8 3 2	1221	0.00	56.0 6.0 7.0 9.0 7.0	5125 7.49 6.47
Mortality from certain causes	State and period period Low popu-			Michigan: 1886 1885 1885 Minnesota:	1936 1935 1934 Mississippi	1936 1935 Wortene	1936 1935 Nebraska:	1936 1935 1934 New Jersey:	1936 1935 1934 New York:	1936 1935 1934

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<u>∞+∞</u>	#2 = 0 6:0;8;	421- 126.7.	7-1 5.2.7.	448 688	828	<u> </u>	88.4. 88.4.	7.82 7.82	7777
9.6.1 8.6.0 8.6.0	R. R. R.	464	ův;€	1410,00	1. E.Z	%;;% 7,0%		44:14	446
<u> ୭</u> ୧୧	55.1 80.2	62.3 64.0	288 200	7.7.8. 21.4	62.5 68.7 7.0	46.8 50.9 51.0	65.9 65.6	5.85 2.7.7	<u> ೯</u> ೯೯
142.7 118.3 134.0	105.8 105.8 106.2	122.5 103.6 104.2	124. 1 95. 4 107. 4	90.0 136.2 105.3	154. 5 112. 4 102. 3	123. 1 104. 8 96. 0	90.5 4.16	127.6 107.9 98.3	8.8.9 8.4.4
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ë	Pennsylvania: 1936 1935 1934		South Carolina: 1936 1936	South Dakota: 1936. 1935.	Tennessee: 1836. 1836. 1934.	Virginia 1936 1935 1934	Washington: 1936 1935 1934	1936 1936 1936 1937	W Isconsin: 1936 1935

No deaths. Data not available. October 20, 1936 1496

THE SELENIUM PROBLEM IN RELATION TO PUBLIC HEALTH

A Preliminary Survey to Determine the Possibility of Selenium Intoxication in the Rural Population Living on Seleniferous Soil 1

By MAURICE I. SMITH, Principal Pharmacologist, K. W. FRANKE, Consultant, and B. B. WESTFALL, Assistant Chemist, United States Public Health Service

INTRODUCTION

For many years there has been known to the farmers of the Great Plains of the North Central region of the United States a chronic disease in livestock commonly and erroneously referred to as "alkali" disease. The first scientific report of it appears to have been written in 1856 by Dr. T. C. Madison, who, as an Army surgeon while stationed at Fort Randall, now part of Gregory County, S. Dak., observed this condition in many cavalry horses. Madison also correctly suggested a toxic factor in the local forage as a probable cause of the disease. His suggestion seems to have been forgotten, however, for until relatively recent times the disease has been commonly associated with high-mineral content in the drinking water generally prevalent in those localities where the disease has been known to occur, hence the term "alkali" disease.

The chief characteristics of this disease as it manifests itself in horses, cattle, and hogs are loss of hair, especially from the mane and tail of horses, loss of weight and emaciation, and varying degrees of involvement of the hoofs. Excellent descriptions of the gross and microscopic pathology may be found in papers by Franke et al. (2) and Draize and Beath (3).

The true nature of so-called "alkali" disease did not become generally known until Franke (4) demonstrated the toxic character of some of the grains grown in sections of South Dakota where the disease in livestock has been more or less prevalent. Following this, Robinson (5) was able to demonstrate the presence of selenium in the grain which had been previously found to be toxic to animals. The work of Hurd-Karrer (6) furthermore demonstrated the ability of plants to assimilate selenium from the soil, and a survey by Byers (7) showed the wide though spotty distribution of selenium in the shale soils and in the grain and vegetation grown in several of the States of the North Central Great Plains.

This succession of events has thus led not only to a better understanding of the etiology of the so-called "alkali" disease in livestock, but it has also served to focus attention upon the possibility that the public health might be involved, since selenium-bearing grain and vegetation grown upon seleniferous soil may also enter into the human

¹ From the Division of Pharmacology, National Institute of Health, Washington, D. C.



FIGURE 1.

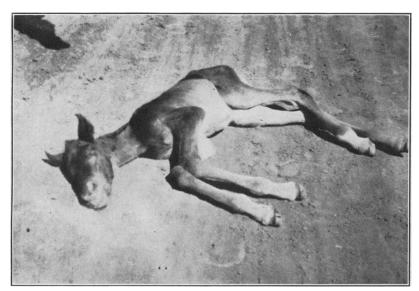


FIGURE 2.

Congenital "alkali" disease in a 14-day-old colt born of a mare that became "alkalied" during gestation. Note condition of hoofs and joints. A golden-yellow, semigelatinous effusion filled the joints of the extremities and infiltrated adjoining tissues. A similar effusion was found in the pleura and pericardium. The liver and kidneys contained 300 and 19 micrograms of selenium, respectively, per 100 grams.

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dietary. It is this phase of the selenium problem with which the present report is concerned.

SCOPE AND CHARACTER OF THE INVESTIGATION

At the outset it seemed probable that, if selenium is ingested in any appreciable amount anywhere, it would be most pronounced in the rural populations subsisting largely on the products of relatively restricted soil areas. A survey was therefore instituted to cover a selected moderately large group of the farming population in three of the Great Plains States, South Dakota, Wyoming, and Nebraska. The choice of locations was determined by three factors: First, use was made of the geologic information available concerning the distribution of Cretaceous shale deposits in the soil, since, according to recent investigations, there appears to be a high incidence of selenium in such shale soils (7, 8). Second, use was made of the published chemical data by Byers (7) on the incidence and distribution of selenium in the soil and some of the vegetation in the aforementioned States. The third and the most important determining factor in this investigation was the incidence of so-called "alkali" disease in livestock. A present or past history of this disease on a given farm was considered presumptive evidence of the occurrence of selenium in the food products grown there. With very few exceptions, therefore, the material and information included in this report were secured only upon those farms and ranches where a reliable history of "alkali" disease could be obtained. Knowledge of the occurrence of the condition is frequently denied upon direct questioning, for reasons that are not difficult to see, and it has often been necessary to resort to lengthy indirect questioning before full confidence and cooperation could be secured.

As evidence of selenium ingestion by the human population and of possible harmful effects therefrom, careful note and inquiry were made concerning the health conditions of the members of families Information was obtained regarding the dietary habits of the family groups to ascertain to what extent the foodstuffs produced locally actually entered into their dietary. Wherever possible, general physical examination was made in an attempt to discover one or more symptoms that might be considered sufficiently characteristic of selenium intoxication to be of probable aid in diagnosis. In this the supposed toxicological similarity of selenium to arsenic was always borne in mind, and the typical symptomatology of "alkali" disease was used as a guide. Finally, in suitable cases samples of urine were secured for chemical analysis for selenium in the belief that, if found, it would not only furnish direct proof of the ingestion of this element but might also be helpful in appraising the value of the clinical observations and findings.

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The entire survey extended over a period of about 6 weeks, from the latter part of April to early June. With few exceptions little or no home-grown garden food, which might be considered as the most probable source of selenium, was being consumed at the time, since it was too early for the new supply, and there are usually not enough garden vegetables raised there to provide a liberal supply for the entire year. Thus the chief dietary constituents that might possibly have carried selenium at that time were meats, milk and milk products, eggs, and a relatively limited amount of garden vegetables raised during the preceding year. Home-grown grain usually constitutes an important source of food for the animals, but probably little of it is used by the family group directly.

The survey comprised an examination of 111 families living on farms or ranches in the following States and counties: Eastern border of Wyoming—Albany and Niobrara Counties; southwestern South Dakota—Fall River, Custer, Pennington, Meade, Stanley, Hughes, Jones, Lyman, Tripp, Brule, and Gregory; Northern Nebraska—Boyd County. One hundred and sixty-seven subjects of those families were selected as suitable donors for urinary specimens. However, only 127 specimens were actually received in satisfactory condition and examined. These specimens represented 90 of the 111 families visited.

It may be of interest to note in passing that active so-called "alkali" disease in horses, cattle, or hogs was seen on only 11 farms, though in nearly all cases there was a very definite past history of this disturbance. In Wyoming this disease is often referred to as "blind staggers", apparently a more acute manifestation of selenium intoxication, if we may accept the views of Beath and his associates on this subject (3, 8).

URINARY ANALYSIS FOR SELENIUM

The method we have used for selenium determination is based on that developed by Byers and his associates for its determination in organic material (9, 10). Briefly, our procedure is as follows:

Fifty to 500 cc of urine,² according to the amount of selenium present, are treated in a Pyrex beaker with 25 cc of concentrated nitric acid, 30 cc of 30 percent hydrogen peroxide,³ and 25 cc of concentrated sulphuric acid for 6 hours at room temperature. Thirty cc of hydrogen peroxide are added, and the mixture is then slowly evaporated on the water bath at 80° C. until nitric acid fumes begin to come off in appreciable amount. Additional quantities of 40 cc of concentrated nitric acid and 20 cc of concentrated sulphuric acid are then added and the oxidation process is continued on the hot plate

² We have used thymol or toluol as preservative.

Merck's "Superoxol", and the cheaper product, DuPont's "Perone" have been found equally satisfactory.

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for several hours until all traces of nitric acid have been removed, taking care that the temperature of the mixture does not exceed 120° to 122° C. The residue consisting of about 60 cc is then transferred quantitatively with the aid of about 40 cc of water to an all glass, Pyrex distillation apparatus, 80 cc of 48 percent hydrobromic acid and about 0.5 cc of bromine are added, and the mixture is distilled into a 100-cc wide mouth Erlenmyer flask until about 75 cc of distillate have been collected. The ice-chilled distillate is then treated with sulphur dioxide until the bromine is completely discharged, about 0.5 gram of hydroxylamine hydrochloride is added, and the mixture is heated at 80° C. for 15 to 20 minutes.

In the presence of as little as 0.01 to 0.02 mg of selenium a fine distinctly perceptible red precipitate separates out over night. The precipitate is collected on an asbestos pad by suction filtration through a small Gooch crucible, washed with a little water containing some hydrobromic acid, dissolved with the aid of 5 cc of 1:10 bromine in hydrobromic acid, the solution being filtered into a 25 cc volumetric flask or accurately graduated cylinder, water is then added to make about 20 cc, sulphur dioxide gas is passed in to discharge the bromine, 1 cc of 10 percent hydroxylamine hydrochloride in 0.15 percent gum acacia is added, sufficient water is added to make 25 cc, and the mixture is heated at 80° C, for about 15 minutes. A set of standards is made up simultaneously, using suitable amounts of a stock standard solution of 0.05 mg selenium per cc in dilute aqueous solution of hydrobromic acid.⁵ The standards are treated with bromine in hydrobromic acid, sulphur dioxide, and hydroxylamine hydrochloride in gum acacia solution in exactly the same manner as the unknowns. After cooling the solutions readings are made in the nephelometer, 6 matching the unknown against the nearest standard set at 20 on the scale.

The range of selenium that is most satisfactorily estimated in this manner is 0.01 mg to 0.1 mg. Quantities in excess of 0.1 mg are difficult to estimate accurately by means of the nephelometer. The limit of sensitivity of the method as we have used it is 0.005 mg of selenium. Having used in this work quantities of urine up to 500 cc, we have, therefore, been able to detect with a fair degree of certainty quantities as low as 1 to 2 micrograms per 100 cc. Five micrograms percent or more can be estimated by this method with an accuracy of \pm 10 percent. In urine specimens collected in the laboratory from 20 normal individuals residing in Washington and nearby Maryland or Virginia we have been unable to detect selenium, and so if our control urines contained any selenium it was less than the order of magnitude of 1 to 2 micrograms percent.

⁴ Manufactured by Will Corporation, Rochester, N. Y.

The standard is made from an aqueous solution of Na2SeO3 analyzed for selenium gravimetrically.

⁶ Klett colorimeter-nephelometer has been used in this work.

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RESULTS AND DISCUSSION OF THEIR PROBABLE MEANING

We shall attempt to present the results of this investigation in summary fashion without omitting the more essential details. The findings will be discussed first from the clinical point of view and, second, from the point of view of the chemical data obtained in the urinary analysis for selenium.

From the clinical standpoint we may state at once that no symptom or group of symptoms could be discovered so far that might be considered pathognomonic of selenium poisoning in man. This is entirely in accord with the experience of local physicians with many of whom the problem was discussed. No serious illness was seen in any of the 111 families visited that could have been definitely attributed to selenium poisoning. Vague symptoms of ill health, and symptoms indicative of more or less serious damage to the liver, kidneys, skin, and joints were seen, and the impression was gained that the incidence of such disorders was rather high. It is evident, however, that the causes for such disorders are many, and in the present state of our knowledge it is impossible to determine the role of selenium, if any, in their causation. Respiratory diseases, on the other hand, were infrequently seen.

The following presents a broad statistical summary of the more pronounced disease states seen in the 111 families visited, exclusive of the more vague symptoms of anorexia, indigestion, general pallor, malnutrition, etc.:

- 1. Bad teeth, varying from marked discoloration through all stages of decay, were seen in one or more members of 48 families.
- 2. Yellowish discoloration of the skin, in many cases a very definite icterus, and in some cases seemingly associated with more or less definite liver disease, was seen in about 46 subjects.
- 3. Skin eruptions of varying degrees of severity, but not conforming to any one particular type, were seen in 20 subjects.
- 4. Chronic arthritis with more or less permanent changes in the joints was seen in 15 subjects. All degrees of involvement were noted in this group of patients, varying from the milder types of rheumatoid arthritis to the more severely deforming type of arthritis deformans. The hypertrophic degenerative type of arthritis was not seen.
- 5. Diseased nails of the fingers, and in some cases also of the toes, were seen in eight subjects. They were usually symmetrical, atrophic, brittle, irregular, and often presented transverse and at times longitudinal ridging. In some of the cases there was a history of sloughing of the diseased nails at irregular intervals. With the exception

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of one case there was no history of suppuration, and no evidence of acute or subacute inflammation.

6. Lastly, subcutaneous edema of probably cardio-renal origin was seen in five cases, and peripheral neuritis of doubtful etiology was seen in two subjects. Fifteen subjects gave a history of more or less protracted gastrointestinal disturbances.

Whether or not selenium is implicated in any or all of the above conditions cannot be stated with any degree of certainty. In the discussion to follow, on the urinary selenium, an attempt will be made to correlate the clinical findings with the selenium concentration in the urine, and there we shall endeavor to point out probability or lack of probability as to cause and effect.

The urinary analysis for selenium revealed the following facts: One hundred and twenty-seven specimens, of as many subjects, representing 90 of the 111 families that had been visited, were received in good condition and were analyzed. The great majority of the specimens, more than 92 percent in fact, contained selenium, many in appreciable quantities, and some in amounts so high as to suggest probable intoxication, especially if viewed in the light of the small number of observations made on animals affected with so-called "alkali" disease. The concentration of urinary selenium is shown in some detail in table 1, where the whole series has been divided arbitrarily into seven groups, according to the amount of selenium found. It will be noted that the highest amount of selenium found in the urine of this series of cases was 133 micrograms percent.

Table 1.—Urinary selenium concentration in 127 subjects, representing 90 families

Group	Selenium, micrograms per 100 cc	Number of subjects	Percent of total
1 2 3	0	4 6 35 22	3. 1 4. 8 27. 6 17. 3
5 6 7	20 to 49	37 19 4	29. 2 14. 9 3. 1

In a small series of urines obtained from three horses and one colt in various stages of "alkali" disease the selenium concentration ranged from 33 to 170 micrograms per 100 cc, as follows:

(1) Colt urine, autopsy specimen (see figs. 1 and 2), 33 micrograms per 100 cc; (2) catheterized specimen, horse no. 1, 100 micrograms per 100 cc; (3) catheterized specimen, horse no. 2, 125 micrograms per 100 cc; (4) catheterized specimen, horse no. 3, 170 micrograms per 100 cc.

In table 2 an attempt is made to correlate the clinical findings with the urinary selenium concentration. The cases are divided arbitrarily into seven groups, as in table 1, according to the selenium concentraOctober 30, 1936 1502

tion in the urine; the number of cases showing symptoms, their ages, and the types of symptoms and their incidence are given in separate columns. The symptoms are given in the order of apparent greatest importance as regards probable cause and effect.

Analysis of the data given in table 2 does not reveal a constant causal association of health disturbances with selenium excreted in the urine. It may be fairly assumed that a higher concentration of selenium in the urine probably represents a higher level of intake, and a correspondingly higher concentration in the tissues; nevertheless, with the exception of the negative group, which is too small for statistical purposes anyway, there is but little difference in the percentage of symptomatic cases in the six groups with a wide selenium range in the urine from a trace to 133 micrograms percent. The percentage of symptomatic cases in these 6 groups runs irregularly from 63 to 75, it being almost the same in the low-selenium as in the high-selenium groups.

Table 2.—Urinary selenium concentration in relation to age and clinical symptomatology

Selenium, micrograms per 100 cc	Num- ber of cases	Ages	Number showing symptoms	Age (years)	Symptoms and their incidence
0	4	10-42	,	42	Bad teeth, dermatitis.
Trace	6	10-62	1 1	19-62	Icteroid skin (2), bad teeth (1), dermatitis (2), gas-
11800	v	10-02	-	10-02	trointestinal (1), edema (1).
2 to 9	35	5-70	22	12-70	Icteroid skin (8), bad teeth (12), dermatitis (6), arthritis (4), gastrointestinal (3), pathological nails (2), edema (2).
10 to 19	22	7-64	15	7-64	Intervident (2). Icteroid skin (7), had teeth (7), dermatitis (3), arthritis (4), pathological nails (1).
20 to 49	37	1-65	25	1-65	Icteroid skin (11), bad teeth (11), dermatitis (4), arthritis (2), gastrointestinal (4), pathological nails (2), anemia (1).
50 to 99	19	4-62	13	35-62	Icteroid skin (7), bad teeth (6), dermatitis (4), arthritis (4), gastrointestinal (2), pathological
100 to 133	4	6-68	3	29-68	nails (2), edema (2). Icteroid skin (3), bad teeth (1), gastrointestinal (3).

¹This was a case of severe hypochromic anemia with intestinal hemorrhages of unknown etiology in a 1-year-old baby referred to by Dr. E. B. Bradley of Spencer, Nebr. The urinary selenium was 32 micrograms per 100 cc.

The lack of more definite association of clinical evidence of selenium intoxication with its concentration in the urine does not, however, warrant the assumption of its harmlessness. Indeed we have the rather strong impression that some of the signs of ill health, though neither of a specific nor, in most cases, of a serious nature, may probably be the direct result of more or less continuous ingestion of small quantities of selenium over a long period of time. The high incidence of symptoms in the groups excreting relatively small quantities of selenium may be explained on the assumption that they are the manifestations of chronic irreparable damage wrought by the ingestion of the element in higher concentrations at some time in the past. Indeed, the amount of selenium ingested must of necessity

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vary from time to time with changing climatic conditions, which undoubtedly have an effect upon the availability of locally produced selenium-bearing foodstuffs. The more surprising thing to us is that there is not greater definite evidence of serious injury, particularly in the groups showing the higher concentrations of selenium in the urine.

Selenium, as inorganic selenite or selenate, is a highly toxic ele-It is often compared toxicologically with arsenic. Its acute toxicity on intravenous injection in rats we have found to be about two times as great as that of arsenic in the form of arsenite, the minimum lethal dose of selenium being 3.0 mg per kilo while that of arsenic is about 5 to 6 mg per kilo. It should be borne in mind that, according to the best available evidence, the selenium in selenium-bearing foodstuffs is in organic combination (11, 12) and may possibly have a different fate in the body from inorganic selenium even though its toxicity appears to be at least as great (13). More detailed information regarding the sources of selenium, accurate knowledge concerning the quantitative relationship between the selenium excreted to that ingested and stored in the tissues, more intimate knowledge concerning the chemical nature of the compound or compounds of selenium occurring in foodstuffs, and a thorough knowledge of the fate of these compounds in the body are some phases of the general problem requiring solution before its public health significance can be fully appreciated. Some of these problems are now under investigation.

From the standpoint of clinical diagnosis we can offer but little information. None of the subjects we have studied presented many symptoms suggestive of a similarity to chronic arsenic poisoning. We were impressed with the high incidence of icteroid discoloration of the skin and believe that this may have some significance. The high frequency of bad teeth seen in the subjects of our study may or may not have some significance. The same may be said of the rather high incidence of arthritis and of pathological disturbances in the nail structures. These symptoms are suggestive in view of the not infrequent occurrence of joint involvement in "alkalied" animals in association with the disturbance in the hoofs which is almost pathognomonic of this disease.

It has already been pointed out that the most pronounced symptoms and manifestations of ill health seen in the series of cases were (1) bad teeth, (2) icteroid skin, (3) dermatitis, (4) arthritis, (5) gastro-intestinal disturbances, and (6) diseased nails. To arrive at some conclusion as to the probable diagnostic significance of the abovenamed symptoms, all the cases of the entire series, the urines of which had been analyzed for selenium, were divided into the above clinical groups and the number of cases in each clinical group associated with no or with relatively high urinary selenium, respectively, was calculated on a percentage basis, as shown in table 3. In the analysis,

none or a trace is considered as no selenium, while 20 micrograms or, more are considered as relatively high and assumed to be of probable significance.

TABLE 3.—Association of certain clinical groups with urinary sele	nium
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	Total num- ber of cases	Percent of cases showing-			
Clinical group	with com- plete data on urinary selenium	No selenium in the urine	20 or over micrograms per 100 cc		
Bad teeth Leteroid discoloration of the skin Dermatitis Arthritis Gastrointestinal Pathological nails Asymptomatic group	34 36 19 13 14 7 22	6 11 16 0 0 0	47 53 31 30 57 57		

Inspection of the table will show that relatively high urinary selenium is most often associated with pathological disturbances of the nails, with gastrointestinal disorders, and with icteroid skin. The incidence of high urinary selenium in the clinical groups of dermatitis and arthritis was no greater than in the symptomless group.

Probably all that can be said at this time is that, in the presence of any or all of the above symptoms in an individual with a history of exposure to selenium through association with seleniferous soil and so-called "alkali" disease in livestock, a careful and thorough analysis of the urine for selenium should be made. A careful consideration of the findings in relation to the symptomatology may help to account for some of the obscure ailments in selenium-endemic regions.

SUMMARY AND CONCLUSIONS

A survey has been made of some of the rural population of parts of Wyoming, South Dakota, and Nebraska to determine the possibility of selenium intoxication through the ingestion of locally produced selenium-bearing foodstuffs.

A series of 111 families was studied for clinical evidence of selenium intoxication, and a series of 127 urines of as many subjects, representing 90 families, was analyzed for this element.

Many vague symptoms of ill health and some of a more serious nature were seen, most of which could be classified into six major clinical groups, none of which was sufficiently characteristic to be ascribed to the ingestion of selenium exclusively.

The results of the urinary analysis showed that only 8 percent of the cases were free or nearly free of selenium, while 92 percent contained amounts varying from 2 to 133 micrograms of selenium per 100 cc. This affords definite proof of the absorption of selenium by some of the rural population in the foregoing States.

The question as to the effects of selenium, in the quantities ingested, on the health of the population remains an open one.

ACKNOWLEDGMENTS

Our sincere thanks are due to E. P. Painter, South Dakota Experiment Station, Brookings, for carrying out many selenium analyses: to Drs. T. H. Ruth, director, animal husbandry, Pierre, S. Dak., and G. W. Cronen, assistant veterinary, United States Bureau of Animal Industry, Pierre, S. Dak., for valuable aid in securing animal material; and to Dr. O. A. Beath, Wyoming Agricultural Experiment Station, at Laramie, for much help in securing human material in Albany County, Wyo.

REFERENCES

Madison, T. C.: 36th Cong., 1st sess. Senate Ex. Doc., No. 52, pp. 37-41 (1860). Cited by Franke et al. (2)
 Franke, K. W., Rice, T. D., Johnson, A. G., and Schoening, H. W.: U. S. Dept. Agric. Circular No. 320 (1934).

- Dept. Agric. Circular No. 320 (1934).

 (2) Draize, H. J., and Beath, O. A.: J. Am. Vet. Med. Assoc., 86: 753 (1935).

 (4) Franke, K. W.: J. Nutr., 8: 597 (1934).

 (5) Robinson, O. W.: J. Assoc. Off. Agr. Chem., 16: 423 (1933).

 (6) Hurd-Karrer, A. M.: J. Agric. Res., 50: 413 (1935).

 (7) Byers, H. G.: U. S. Dept. Agric. Tech. Bull. No. 482 (1935).

 (8) Beath, O. A., Eppson, H. F., and Gilbert, C. S.: Univ. of Wyoming Agric. Exp. Station Bull. No. 206 (1935).

 (9) Robinson, O. W., Dudley, H. C., Williams, K. T., and Byers, H. G.: J. Ind. Eng. & Chem., Anal. Ed., 6: 274 (1934).

 (10) Williams, K. T., and Lakin, H. W.: J. Ind. Eng. Chem., Anal. Ed., 7: 409 (1935).
- (1935). (11) Franke, K. W.: J. Nutrition, 8: 609 (1934).

(12) Horn, M. J., Nelson, E. M., and Jones, D. B.: Cer. Chem., 13: 126 (1936). (13) Franke, K. W., and Potter, Van R.: J. Nutr., 10: 213 (1935).

PLAGUE INFECTION IN FLEAS FROM MONTEREY COUNTY. AND THE LAKE TAHOE REGION, CALIFORNIA

According to a report dated October 13, 1936, to Senior Surgeon C. R. Eskey from Dr. K. F. Meyer, of the Hooper Foundation. University of California, plague infection in fleas has been proved by guinea-pig inoculation as follows:

Fleas collected from ground squirrels (Citellus beecheyi) in the San Ardos area of Monterey County.

Pooled fleas taken from chipmunks (genus Eutamias) and ground squirrels (Citellus beecheyi and genus Callospermophilus) in the Lake Tahoe region.

A human case of plague was reported from Monterey County in June of this year, but this is the first evidence of plague in ground squirrels in this county since 1931.

The fleas collected near Lake Tahoe were from the region where a human case of plague occurred in July of this year.2

Public Health Reports, July 10, 1936, p. 939.

³ Public Health Reports, Oct. 2, 1936, p. 1392.

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COURT DECISION ON PUBLIC HEALTH

Tuberculosis, contracted by employee in business of manufacturing women's dresses because of conditions of employment, held not compensable as occupational disease under workmen's compensation act.—
(Connecticut Supreme Court of Errors; Madeo v. I. Dibner & Bro., Inc., et al., 186 A. 616; decided July 30, 1936.) An employee in the business of manufacturing women's dresses claimed compensation under the Workmen's Compensation Act for disability due to pulmonary tuberculosis. The finding disclosed that the tuberculosis from which she suffered was contracted because of conditions of employment. The commissioner awarded compensation, but the trial court sustained the appeal of the defendants, and plaintiff appealed to the supreme court of errors.

The compensation act defined a personal injury as including "occupational disease", which, in turn, was defined as "a disease peculiar to the occupation in which the employee was engaged and due to causes in excess of the ordinary hazards of employment as such."

The supreme court quoted from a prior case in which it had said that "to come within the definition, an occupational disease must be a disease which is a natural incident of a particular occupation, and must attach to that occupation a hazard which distinguishes it from the usual run of occupations and is in excess of that attending employment in general." Regarding this definition, the court, in the instant opinion, stated that "It does not include a disease which results from the peculiar conditions surrounding the employment of the claimant in a kind of work which would not from its nature be more likely to cause it than would other kinds of employment carried on under the same conditions." "In this case", said the court, "the plaintiff's disease resulted from the conditions of her particular employment in the factory of the defendants. Other trades carried on under those conditions would have been as likely to cause the disease as the manufacture of dresses."

The action of the trial court in denying compensation was sustained.

DEATHS DURING WEEK ENDED OCTOBER 10, 1936

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

	Week ended Oct. 10, 1936	Correspond- ing week, 1935
Data from 86 large cities of the United States: Total deatls. Deaths per 1,000 population, annual basis. Deaths under 1 year of age. Deaths under 1 year of age per 1,000 estimated live births. Deaths per 1,000 population, annual basis, first 41 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 41 weeks of year, annual rate.	7, 885 11. 9 619 56 12. 1 68, 555, 395 10, 639 8. 1 9. 9	7, 556 10. & 469 43 11. 4 67, 711, 405 11, 077 8. 5 9. 7

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 Oct. 17, 1936, and Oct. 19, 1935

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Oct. 17, 1936, and Oct. 19, 1935

	Diph	theria	Influenza		Measles		Meningococcus meningitis	
Division and State	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935						
New England States: Maine	3 2 1	1 10	1		2 68 1	31 30 38 8	0 0 0 1	0 0 0 1
Rhode Island	2	30 13	3 1 13 10	1 10 9	55 33	30 144 15	1 8 0	0 12 0
Pennsylvania. East North Central States: Ohio	24 45 40	54 65 89	29 22 10	20 17 9	26 8 1 11	45 31 5 15	4 7 5 2	5 7 1
Illinois	24 5 6	66 13 5	2 27 4	30 1	19 10 10	36 40 8	1 0 3	1 0
Iowa Missouri North Dakota South Dakota	7 29 1	8 64 4 11	5 77	56	3 1 1	9 9 8	2 1 0 1	0 4 1 0 0
Nebraska	· 7	15 23 1 18	10	10	1 1	3 2 7 10	1 0 0 2	2 0 4
Maryland ²	6 38 40 149	6 66 53 119	19	1 15 8	3 6 7	9 5 3	0 9 0 1	2 4 1 4
South Carolina 3 Georgia 3 Florida	5 54 3	26 33 18	98 3	169 2	- 1	3 9	0 1 0	1 0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Oct. 17, 1936, and Oct. 19, 1935—Continued

				, .				
	Diph	theria	Infl	uenza	Me	asles	Meningococcus meningitis	
Division and State	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935
East South Central States: Kentucky Tennessee Alabama Mississippi West South Central States:	27 65 35 22	59 88 43 25	9 18 26	10 4 25	3 3	51	2 2 2 2 0	1 1 1 0
Arkansas Louisiana 3 Oklahoma 4 Texas 3 Mountain States:	20	17 26 9 130	27 6 49 123	10 8 37 130	3 8 3	1 3 2 3	0 1 0 2	0 3 0 1
Montana Idaho Wyoming Colorado New Mexico	8 8	1 13 14	37 1 4	1	67 1 2 21	27 1 20 3 13	0 0 0 2	0 0 3 0
Arizona	7	2 1	34	20	1 5 7	1 53	0 0	0
Oregon California		65	14	30	16	162 116	3	3
Total First 42 weeks of year	20, 021	1, 328 26, 026	705 144, 721	108, 230	422 273, 299	701, 383	6, 476	72 4,727
Division and State	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935
New England States: Maine New Hampshire Vermont Massachusetts Rhode Island Connecticut Middle Atlantic States: New York New Jersey Pennsylvania East North Central States: Ohio. Indiana Illinois. Michigan Wisconsin West North Central States:	1 1 0 2 0 1 14 0 8 45 33 53	8 2 2 47 9 17 844 266 13 3 3 7 16 1	15 7 2 72 17 15 153 34 177 185 5 197 104 126	14 3 7 149 5 24 321 75 297 303 125 399 135 383	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 4 1 25 3 43 16 1 7 7	2 0 0 4 0 5 2 2 3 42 24 7 10 7
Minnesota Iowa Nissouri North Dakota South Dakota Nebraska Kansas South Atlantic States:	2 7 8 4 0 1 1	3 7 1 1 0 0	45 68 57 19 21 24 40	176 93 132 · 32 34 57 80	10 8 0 11 2 1 3	0 2 6 0 2 6	0 4 23 3 1 0	4 7 11 1 1 1 8
Delaware. Maryland ² District of Columbia. Virginia West Virginia North Carolina ² South Carolina ² Georgia ² Florida	0 3 0 1 3 2 5 9	0 3 1 7 1 8 1 0	4 39 6 21 80 88 9 15 2	5 63 14 60 137 95 17 25 3	0 0 0 0 0	0	1 9 0 24 14 9 6 28	6 18 2 6 12 5 6 8

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Oct. 17, 1936, and Oct. 19, 1935—Continued

	Polior	n yelitis	Scarle	et fever	8ms	llpox	Typho	id fever
Division and State	Week ended Oct. 17, 1936	Week ended Oct. 19 1935	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935	Week ended Oct. 17, 1936	Week ended Oct. 19, 1935
East South Central States: Kentucky Tennessee Alabama ^a Mississippi	4 48 5 4	13 0 1 1	53 65 83 18	104 83 20 28	0 0 0	0 0 0 0	26 14 18 7	19 23 4 8
West South Central States: Arkansas. Louisiana Oklahoma Texas	9 1 0 1	2 3 0 8	6 9 5 20	12 10 11 62	0 0 0	0 0 0 5	7 16 26 15	5 13 11 38
Mountain States: Montana. Idaho. Wyoming. Colorado. New Mexico. Arizona.	0 3 0 1 2	1 0 0 0	33 87 6 16 14	77 21 32 89 16	31 2 1 5 0	2 0 0 0	2 1 0 1 16	3 0 0 3 35 2
Utah ¹ . Pacific States: Washington Oregon California	0 4 13	1 2 5 20	13 39 15 149	56 51 50 154	0 1 0 0	0 4 0 2	0 6 4 9	4 2 12
Total First 42 weeks of year	3, 358	9, 615	2, 277 195, 947	4, 147 198, 862	78 6, 391	5, 606	11, 850	14, 931

SUMMARY OF MONTHLY REPORTS FROM STATES

The following reports of cases reported monthly by States 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	Mala- ria	Mea- sles	Pellag- ra	Polio- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
August 1936 New Mexico North Dakota Puerto Rico September 1936	1	13 6 46	2 2 79	8 2, 021	19 1 91	2	3	23 12	0 9	36 2 70
Alabama Idaho Indiana Iowa Maryland Massachusetts Michigan Minnesota New Mexico North Dakota Ohio Pennsylvania South Carolina	5 2 14 4 10 2 1 1 2 13	130 2 41 13 37 28 53 35 88 88 86 333	33 33 33 13 13 21 35 341	1, 249 2 10 3 17 1 14 5 1 1, 623	1 17 9 34 106 46 29 42 4 57 94	17 1 1 2 1 1 78	39 3 13 24 16 8 37 10 10 4 108 27 0	49 20 136 93 74 188 323 94 20 25 431 425 22	0 0 11 0 0 5 5 0 17 2 0	83 11 46 15 46 19 41 14 75 5 193 130 46

New York City only.
 Week ended earlier than Saturday.
 Typhus fever cases, week ended Oct. 17, 1936, 53 cases, as follows: North Carolina, 2; South Carolina, 2; Georgia, 30; Alabama, 15; Louisiana, 1; Texas, 3.
 Exclusive of Oklahoma City and Tulsa.
 Two preparalytic cases included.

New Mexico Cases Chickenpox	August 1938		Seplember 1936—Continu	ed	September 1936—Contin	ned
Chickenpox	New Mexico:	Cases	Dysentery-Continued.	Cases	Rocky Mountain spotter	1
Conjunctivitis		7	Pennsylvania (bacil-	-		
Dysentery (amoeble)	Conjunctivitis	1		1		- 4
Epidemic encephanitis 3	Dysentery (amoebic)	1	Epidemic encephalitis:			-
Epidemic encephanitis 3	Dysentery (bacillary)	32	Indiana		Idaho	. 1
Mumps	Epidemic encephantis.	3	Iowa		Maryland	. 9
New Mexico			Maryland			
Septic scre throat.	Mumps					
Trachoma		į	New Mexico		Minnesota	. 3
Whooping cough					New Mexico	. 3
North Dakota: Chickenpox	Trachoma		Carron mandan	2		
Chickenpox		01		•	Tatanus	. 04
Mumps		11	Morviond	é		ĸ
Trachoma			Massachusetts		Maryland	. 2
Puerto Rico: Chickenpox	Trachoma		New Mexico		Massachusetts	. 4
Chickenpox			Ohio			
Dysentery			Pennsylvania		Pennsylvania	
Filariasis	Dysentery	75				
Mumps			South Carolina	90	Iowa	
Totum		16	Impetigo contagiosa:		Massachusetts	. 4
Puerporal septicemia 9 Maryland 3 Massachusetts 2 Massachusetts 2 Trichinosis: Massachusetts 3 Trichinosis: Massachusetts 1 Massachusetts 2 Minnesota 2 Minnesota 2 Minnesota 2 Ohio 2 Oh	Ophthalmia neona-		Maryland	31	Michigan	
Tetanus	_ torum		Lead poisoning:	_	Ohio	. 3
Tetanus, infantile	Puerperai septicemia		Maryland			2
Trachoma	Tetanus infortile					3,
Pennsylvania 1						÷
Mumps: Alabama 1 Jahama 38				Minnacota		
Anthrax:	Whooping cough					
Anthrax	Sentember 1986			25	South Carolina	
Anthrax	Septement 1000		Idaho		Typhus fever:	•
Pennsylvania	Anthrax:				Alabama	38
Chickenpox: Alabama 2 Maryland 118 Massachusetts 180 Undulant fever:	Pennsylvania	1	Iowa		Michigan	2
Idaho			Maryland			4
Indiana			Massachusetts			
Iowa			Michigan			
Maryland			New Mexico		Indiana	.2
Massachusetts	10Wa				10W8	13
Minnesota 56 Ophthalmia neonatorum:	Maryland				Maryland	ğ
Minnesota 56 Ophthalmia neonatorum:	Massachusetts		Couth Corolina			10
New Mexico 12				ر دے	Minneente	10
North Dakota 10			A la hama	1		
Ohio. 98 Massachusetts 99 Pennsylvania 11 Pennsylvania 244 Ohio. 74 Vincent's infection: 11 South Carolina 13 Pennsylvania 8 14 Maryland 12 Maryland 67 Paratyphoid fever: Maryland 1 Maryland 13 Ohio (under 2 years, enteritis included) 86 Michigan 5 Miryland 1 Morth Dakota 6 South Carolina 471 New Mexico 2 Michigan 35 North Dakota 6 Maryland 2 Ohio 2 Idaho 5 Habama 35 Michigan 5 Now Mexico 2 Idaho 5 Idaho 5 5 Michigan (amoebic) 4 Alabama 46 Maryland 527 Missachusetts 569 Michigan 57 Massachusetts 569 Michigan (bacillary) 7 Mischigan 57 Missachusetts 59 <td></td> <td></td> <td>Maryland</td> <td></td> <td></td> <td></td>			Maryland			
Pennsylvania			Massachusetts		Pennsylvania	
South Carolina 13 Pennsylvania 8 South Carolina 10 Maryland 13 Maryland 13 Maryland 13 Maryland 13 Michigan 31 Michigan 32 Michigan 33 Michigan 32 Michigan 32 Michigan 32 Michigan 33 Michigan 32 Michigan 32 Michigan 32 Michigan 32 Michigan 32 Michigan 33 Michigan 34 Michigan 35 Massachusetts 35 Massachusetts 36 Maryland 32 Michigan 36 Minnesota (amoebic) 4 Michigan 36 Minnesota (amoebic) 4 Michigan 36 Minnesota (amoebic) 4 Michigan 36 Minnesota 36 Minnesota 36 Minnesota 37 Michigan 37 Massachusetts 36 Minnesota 37 Michigan 37 Massachusetts 37 Michigan 37 Massachusetts 37 Michigan 37 Massachusetts 37 Michigan 37 Massachusetts 37 Massachusetts 37 Michigan 37 Massachusetts 37 Massachusetts 37 Massachusetts 37 Michigan 37 Massachusetts 37 Massachusetts 37 Michigan	Pennsylvania	244	Ohio	74		
Maryland		13	Pennsylvania		Idaho	1
Ohio (under 2 years, enteritis included)		i		10	Maryland	
South Carolina Sout	Maryland	67	Paratyphoid fever:			
South Carolina	Ohio (under 2 years,		Maryland		North Dakota	6
Dysentery: 84 Ohio 2 Idaho 5			Michigan	5 1	w nooping cougn:	-
Maryland		2/1		2	Ambuina	
Massachusetts (baciliary) 1 Rabies in animals: Iowa 41 Michigan (amoebic) 4 Alabama 46 Maryland 527 Michigan (bacillary) 7 Minesota (amoebic) 4 Michigan 57 Massachusetts 589 Minnesota (amoebic) 4 Michigan 6 Minnesota 225 Minnesota (bacillary) 6 New Mexico 1 New Mexico 17 New Mexico (bacillary) 15 South Carolina 21 Ohio 724 Pennsylvania 1,506 Pennsylvania 1,506 Alabama 1 South Carolina 38	Dyseniery:	94	Gauth Candina			
hary 1	Massachusetts (hadil-	. 02	Robice in onimale	'		
Michigan (bacillary)		. 1		48		
Michigan (Oacillary) 7 Massachusetts 4 Michigan 762	Michigan (amoebic)	4	Indiana			
Minnesota (amoebic)	Michigan (bacillary)	7	Massachusetts		Michigan	
Minnesota (bacillary) 6 New Mexico 1 New Mexico 17 New Mexico (bacillary) 15 South Carolina 21 Ohio 17 Ohio (bacillary) 10 Rabies in man: Pennsylvania 1,506 Pennsylvania Aisbama 1 South Carolina 38	Minnesota (amoebic)	4 1	Michigan		Minnesota	236
New Mexico (becillary) 15 South Carolina 21 Ohio 724	Minnesota (bacillary)	6	New Mexico	ī	New Mexico	
Ohio (bacillary) 10 Rabies in man: Pennsylvania 1, 506 Pennsylvania Alabama 1 South Carolina 38	New Mexico (Dacillary)		South Carolina	21	Ohio	
Pennsylvania Alabama 1 South Carolina 38 (amoebic) 1 Pennsylvania 1	Ohio (bacillary)	10		_ [Pennsylvania	
(amoebic)	Pennsylvania	_ 1	Alabama		South Carolina	38
	(amoebic)	1 1	Pennsylvania	r i		

PLAGUE INFECTION IN MONTEREY AND PLACER COUNTIES, CALIF.

Under date of October 13, 1936, plague infection was reported proved by animal inoculation in fleas taken from rodents collected around Lake Tahoe, in the Carnelian Bay area, Placer County, Calif., and in the San Ardos area in Monterey County, Calif. (See a more detailed report on p. 1505.)

CASES OF VENEREAL DISEASES REPORTED FOR AUGUST 1936

These reports are published monthly for the information of health officers in order to furnish current data as to the prevelance of the venereal diseases. The figures are taken from reports received from State and city health officers. They are preliminary and are therefore subject to correction. It is hoped that the publication of these reports will stimulate more complete reporting of these diseases.

Reports from States

	Sy	phillis	Gone	orrhea
	Cases reported during month	Monthly case rates per 10,000 population	Cases reported during month	Monthly case rates per 10,000 population
Alabama 1				
Arkansas	185	0.93	95	0.48
California	1, 167	2.07	1, 196	2, 12
Connecticut 3	218	1. 27	189	1.10
Delaware	131	5. 12	66	2.58
District of Columbia ¹ Florida	188	1.16	76	. 47
Georgia	1, 255	3.75	462	1.38
Idaho	13	. 27	30	. 63
Illinois	1, 1 63 110	1. 49 . 32	1,071 148	1. 37 . 43
Indiana:	88	.35	184	73
Kansas	59	32	74	.40
Kentucky.	135	. 47	274	.96
Louisiana	186	.88	111	. 52
Maine	30 671	. 36 4. 02	44 267	. 52 1. 60
Maryland	462	1.06	562	1. 28
Michigan.	396	. 85	569	1. 22
Minnesota	254	. 97	350	1, 33
Mississippi	1, 564	7.98	2, 229	11.37
Missourl Montana	368 30	.94 .56	117 86	. 30 1. 62
Montana Nebraska	35	.26	86	. 63
Nevada ³				
New Hampshire	5	. 10	34	. 68
New Jersey	712 44	1.66 1.09	341	.80
New York	7, 254	5.63	2,099	1.63
North Carolina	1,804	5. 28	612	1. 79
North Dakota 1				
Ohio 3	558 192	.83 .77	265 200	. 40 . 80
Oklahoma 3 Oregon	72	.71	182	1.81
Pennsylvania	283	. 28	200	. 20
Rhode Island	128	1.88	89	1.31
South Carolina 3	249	1, 24	323	1. 61
South Dakota	11	. 16 1. 97	40 376	. 59 1. 29
Tennessee.	573 203	.33	99	. 16
Utah 3				
Vermont	27	. 72	38	1.01
Virginia.	564	2. 14 1. 10	328 339	1. 24 2. 08
Washington	179 220	1. 10 1. 21	138	2.08 .76
Wisconsin 4	14	.05	196	. 67
Wyoming 3				
Total	21, 800	1.80	14, 185	1. 17

See footnotes at end of table.

Reports from cities of 200,000 population or over

during month per 10,000 population per 10,000 per	Akron, Ohio Atlanta, Ga.¹ Baltimore, Md Birmingham, Ala Boston, Mass Buffalo, N. Y Chicago, Ill. Cincinnati, Ohio¹ Cleveland, Ohio Cleveland, Ohio Columbus, Ohio Dallas, Tex Dayton, Ohio¹ Denver, Colo Detroit, Mich Houston, Tex.³ Indianapolis, Ind.¹ Jersey City, N. J.¹ Kansas City, Mo Los Angeles, Calif.¹ Louisville, Ky	orted	case rates per 10,000		Monthly
Atlanta, Gs. J. Baltimore, Md. Baltimore, Md. Birmingham, Ala	Atlanta, Ga.¹ Baltimore, Md Baltimore, Md Birmingham, Ala Boston, Mass Buffalo, N Y Chicago, Ill Cincinnati, Ohio¹ Cleveland, Ohio¹ Cleveland, Ohio¹ Columbus, Ohio Dallas, Tex Dayton, Ohio¹ Denver, Colo Detroit, Mich Houston, Tex.⁴ Indianapolis, Ind.¹ Jersey City, N J¹ Kansas City, Mo Los Angeles, Calif.¹ Louisville, Ky		population	during	case rates per 10,000 population
Baltimore, Md. 371 4.50 180 2.1 Birmingham, Ala. 124 4.39 66 2.3 Boston, Mass. 203 2.57 204 2.6 Buffalo, N. Y 182 3.07 68 1.1 Chicago, Ill. 800 2.24 797 2.2 Cincinnati, Ohio 1 163 1.75 105 1.1 Columbus, Ohio 42 1.37 115 3.9 Dallas, Tex 28 97 115 3.9 Dayton, Ohio 1 2 20 1.33 311 1.8 Houston, Tex 1 230 1.33 311 1.8 Houston, Tex 1 230 1.33 311 1.8 Houston, Tex 1 235 7.02 82 2.4 Indianapolis, Ind 1 220 1.37 Los Angeles, Calif 1 22 28 3.1 74 2.7 Milwaukee, Wis 1 15 1.5 2.3 Memphis, Tenn 222 8.31 74 2.7 Milwaukee, Wis 1 15 2.5 Mew Orleans, La.1 15 2.5 New Ark, N. J. 254 5.48 124 2.6 New York, N. Y. 5.387 7.38 1.257 1.7 Oakland, Calif 34 1.12 2.8 Omaha, Nebr 15 8.6 7 Philadelphia, Pa 190 96 54 2.9 Pritisburgh, Pa 190 96 54 2.9 Providence, R. I 73 2.82 64 2.0 Rechester, N. Y. 35 1.04 66 1.6 Rechester, N. Y. 35 2.82 64 2.0 Rechester, N. Y. 35 2.82 64 2.0 Restite, Wash. 98 2.88 166 4.3	Baltimore, Md. Birmingham, Ala. Boston, Mass. Buffalo, N. Y. Chicago, Ill. Cincinnati, Ohio 1. Cleveland, Ohio. Columbus, Ohio. Dallas, Tex. Dayton, Ohio 1. Denver, Colo. Detroit, Mich. Houston, Tex. Indianapolis, Ind.1. Jersey City, N. J. Kansas City, Mo. Los Angeles, Calif.1. Louisville, Ky.	26	0. 96	15	0. 55
Birmingham, Ala 124 4.39 66 2.3	Birmingham, Ala Boston, Mass Buffalo, N. Y Chicago, Ill. Cleveland, Ohio Cleveland, Ohio Cleveland, Ohio Dallas, Tex Dayton, Ohio Detroit, Mich Houston, Tex * Indianapolis, Ind * I gersey City, N. J. Kansas City, Mo Los Angeles, Calif. Louisville, Ky				
Boston Mass 203 2.57 204 2.5	Boston, Mass. Buffalo, N. Y. Chicago, Ill. Cincinnati, Ohio¹. Cleveland, Ohio. Columbus, Ohio Dallas, Tex. Dayton, Ohio¹. Denver, Colo. Detroit, Mich. Houston, Tex.³ Indianapolis, Ind.¹ Jersey City, N. J.¹ Kansas City, Mo. Los Angeles, Calif.¹ Louisville, Ky.				
Buffalo, N. Y. 182 3.07 68 1.1 Chicago, Ill. 800 2.24 797 2.2 Cincinnati, Ohio¹ 163 1.75 105 1.1 Cleveland, Ohio 42 1.37 Dallas, Tex. 28 .97 115 3.9 Dayton, Ohio¹ 36 1.21 42 1.4 Derrer, Colo. 36 1.21 42 1.4 Detroit, Mich. 230 1.33 311 1.8 Houston, Tex.¹ 235 7.02 82 2.4 Indianapolis, Ind.¹ 24 1.8 3.6 6 Louisville, Ky 263 8.12 118 3.6 Memphis, Tenn. 222 8.31 74 2.7	Buffalo, N. Y Chicago, Ill Clorinnati, Ohio Cleveland, Ohio Cleveland, Ohio Columbus, Ohio Dallas, Tex Dayton, Ohio Derrer, Colo Detroit, Mich Houston, Tex Indianapolis, Ind Jersey City, N. J. Kansas City, Mo Los Angeles, Calif. Louisville, Ky				
Chicagó, Ill.	Chicago, Ill. Cincinnati, Ohio¹ Cleveland, Ohio Columbus, Ohio Dallas, Tex Dayton, Ohio¹ Denver, Colo Detroit, Mich. Houston, Tex. Indianapolis, Ind.¹ Jersey City, N. J.¹ Kansas City, Mo. Los Angeles, Calif.¹ Louisville, Ky				
Cincinnati, Ohio 1 Cleveland, Ohio	Cincinnati, Ohio 1 Cleveland, Ohio Cleveland, Ohio Columbus, Ohio Dallas, Tex Dayton, Ohio 1 Denver, Colo Detrolt, Mich Houston, Tex 4 Indianapolis, Ind 1 Jersey City, N. J. 1 Kansas City, Mo Los Angeles, Calif. 1 Louisville, Ky				1. 15
Cleveland, Ohio	Cleveland, Ohio	800	2. 24	797	2. 23
Cleveland, Ohio	Cleveland, Ohio Columbus, Ohio Dallas, Tex Dayton, Ohio¹ Denver, Colo Detrolt, Mich Houston, Tex¹ Indianapolis, Ind¹ Jersey City, N J ¹ Kansas City, Mo Los Angeles, Calif¹ Louisville, Ky			1	
Columbus, Ohio 42 1.37 Dallas, Tex 28 .97 115 3.9 Dayton, Ohio¹ <	Columbus, Ohio Dallas, Tex Dayton, Ohio 1 Denver, Colo Denver, Colo Detrolt, Mich Houston, Tex 5 Indianapolis, Ind 1 Jersey City, N. J. 1 Kansas City, Mo. Los Angeles, Calif 1 Louisville, Ky	163	1. 75	105	1. 13
Dallas, Tex. 28 .97 115 3.9 Dayton, Ohlo 1 36 1.21 42 1.4 Detroit, Mich. 230 1.33 311 1.8 Houston, Tex.* 235 7.02 82 2.4 Indianapolis, Ind.* .	Dallas, Tex Dayton, Ohio 1 Denver, Colo. Detroit, Mich. Houston, Tex 4 Indianapolis, Ind 1 Jersey City, N. J. Kansas City, Mo. Los Angeles, Calif 1 Louisville, Ky				
Dayton, Ohio Denver, Colo.	Dayton, Ohio 1 Denver, Colo Detroit, Mich Houston, Tex 4 Indianapolis, Ind. 1 Jersey City, N. J. 1 Kansas City, Mo Los Angeles, Calif. 1 Louisville, Ky			115	3, 97
Denver, Colo	Denver, Colo. Detroit, Mich. Houston, Tex. Indianapolis, Ind. Jersey City, N. J. Kansas City, Mo. Los Angeles, Calif. Louisville, Ky		1		
Detroit, Mich. 230	Detroit, Mich. Houston, Tex. ¹ . Indianapolis, Ind. ¹ Jersey City, N J. ¹ Kansas City, Mo. Los Angeles, Calif. ¹ Louisville, Ky	36	1 91	42	1 49
Houston, Tex J	Houston, Tex ¹ Indianapolis, Ind. ¹ Jersey City, N. J. ¹ Kansas City, Mo Los Angeles, Calif. ¹ Louisville, Ky				
Indianapolis, Ind.	Indianapolis, Ind. Jersey City, N. J. Kansas City, Mo. Los Angeles, Calif. Louisville, Ky				
Jersey Citty, Mo. 77 1.83 3 .0 Kansas City, Mo. 77 1.83 3 .0 Los Angeles, Calif.¹ 283 8.12 118 3.6 Memphis, Tenn 222 8.31 74 2.7 Minneapolis, Minn 56 1.15 115 2.3 Mewark, N. J 254 5.48 124 2.6 New Orleans, La.¹ 254 5.48 124 2.6 New York, N. Y 5,387 7.38 1,257 1.7 Oakland, Calif. 34 1.12 28 .9 Omaha, Nebr. 15 .68 16 .7 Philadelphia, Pa. 190 .96 .54 .2 Protiand, Oreg.¹ 78 1.14 .28 .4 Providence, R. I 73 2.82 .54 2.0 Rochester, N. Y 35 1.04 .56 1.6 St. Paul, Minn 247 2.96 .44 .6 St. Louis, Mo. 247 2.96 .44 .6 <td< td=""><td>Jersey Čity, N. J.¹. Kansas City, Mo. Los Angeles, Calif.¹. Louisville, Ky.</td><td>200</td><td>1.02</td><td>04</td><td>2. 40</td></td<>	Jersey Čity, N. J.¹. Kansas City, Mo. Los Angeles, Calif.¹. Louisville, Ky.	200	1.02	04	2. 40
Kansas City, Mo. 77 1.83 3 .0 Los Angeles, Calif.¹ 283 8.12 118 3.6 Memphis, Tenn 222 8.31 74 2.7 Minneapolls, Minn 56 1.15 115 2.5 Mew Ark, N. J 254 5.48 124 2.6 New Orleans, La.¹ 254 5.87 7.38 1,257 1.7 Oakland, Calif. 34 1.12 28 9 Ornaha, Nebr. 15 68 16 7 Phitadelphia, Pa. 190 96 54 2 Pittsburgh, Pa. 78 1.14 28 4 Portland, Oreg.¹ 78 1.14 28 4 Providence, R. I. 73 2.82 54 2.0 Rochester, N. Y. 35 1.04 56 1.6 St. Paul, Minn 247 2.96 44 .6 St. Paul, Minn 24 .85 63 2.2 San Antonio, Tex.³ 24 .85 63 2.2	Kansas City, Mo				
Los Angeles, Calif.¹ 263 8, 12 118 3, 6 Memphis, Tenn 222 8, 31 74 2, 7 Minneapolis, Minn 56 1, 15 115 2, 8 Mewark, N. J. 254 5, 48 124 2, 6 New Orleans, La.¹ 254 5, 48 124 2, 6 New York, N. Y. 5, 387 7, 38 1, 257 1, 7 Oakland, Calif. 34 1, 12 28 9 Ornaha, Nebr. 15 68 16 7 Philladelphia, Pa. 190 96 54 2 Pittsburgh, Pa. 78 1, 14 28 4 Portland, Oreg.¹ 73 2, 82 54 2, 0 Rochester, N. Y. 35 1, 04 56 1, 6 St. Paul, Minn 247 2, 96 44 5 St. Paul, Minn 24 2, 96 44 5 San Antonio, Tex.³ 24 85 63 2 San Francisco, Calif. 198 2, 95 135 2, 0 <td>Los Angeles, Calif.1 Louisville, Ky</td> <td></td> <td></td> <td></td> <td></td>	Los Angeles, Calif.1 Louisville, Ky				
Louisville, Ky	Louisville, Ky		1.83	3	.07
Memphis, Tenn. 222 8.31 74 2.7 Milwaukee, Wis.¹ 56 1.15 115 2.3 Minneapolls, Minn. 56 1.15 115 2.3 New Work, N. J. 254 5.48 124 2.6 New Orleans, La.¹ 254 5.887 7.38 1.257 1.7 Oakland, Calif. 34 1.12 28 .9 Omaha, Nebr. 15 68 16 .7 Philadelphia, Pa. 190 .96 .54 .2 Pittsburgh, Pa. 78 1.14 28 .4 Portland, Oreg.¹ 78 1.14 28 .4 Providence, R. I. 73 2.82 .54 2.0 8t. Louis, Mo. 247 2.96 .44 .5 St. Paul, Minn 24 .85 63 .2 San Francisco, Calif. 198 2.95 135 2.0 Seattle, Wash 98 2.88 106	Memphis. Tenn				
Milwaukee, Wis.1 56 1.15 115 2.3 Minneapolis, Minn. 56 1.15 115 2.3 Newark, N. J. 254 5.48 124 2.6 New Orleans, La.1 32 1.257 1.7 Oakland, Calif. 34 1.12 28 .9 Omaha, Nebr. 15 68 16 .7 Philadelphia, Pa. 190 .96 54 .2 Pittsburgh, Pa. 78 1.14 28 .4 Portland, Oreg.1 78 1.14 28 .4 Providence, R. I. 73 2.82 54 2.0 Rochester, N. Y 35 1.04 56 1.6 St. Louis, Mo. 247 2.96 44 5 St. Paul, Minn 24 85 63 2.2 San Francisco, Calif. 198 2.95 135 2.0 Seattle, Wash 98 2.88 106 4.3 Syracuse, N. Y 59 2.71 35 1.6 Toledo, Ohio	Memphis, Tenn				
Minneapolis, Minn 56 1.15 115 2.8 Newark, N. J. 254 5.48 124 2.6 New Orleans, La.! 254 5.887 7.38 1,257 1.7 New York, N. Y. 5.387 7.38 1,257 1.7 Oakland, Calif. 34 1.12 28 .9 Omaha, Nebr. 15 .68 16 .7 Philadelphia, Pa. 190 .96 .54 .2 Pittsburgh, Pa. 78 1.14 .28 .4 Portland, Oreg.¹ 78 1.14 .28 .4 Providence, R. I. 73 2.82 .54 .2 Rochester, N. Y. 35 1.04 .56 1.0 St. Paul, Minn 247 2.96 .44 .6 St. Paul, Minn 24 .85 .63 .2 San Antonio, Tex.³ .85 .63 .2 San Francisco, Calif. 198 2.95 135 2.0 Seattle, Wash. 98 2.88 106 4.3 <tr< td=""><td></td><td>222</td><td>8.31</td><td>. 74</td><td>2.77</td></tr<>		222	8.31	. 74	2.77
New Ark N. J. 254 5.48 124 2.6 New Orleans, La.¹ 5,387 7.38 1,257 1.7 Oakland, Calif. 34 1.12 23 .9 Omaha, Nebr. 15 .68 16 .7 Philadelphia, Pa. 190 .96 .54 .2 Pittsburgh, Pa. 78 1.14 .28 .4 Portland, Oreg.¹ 73 2.82 .54 2.0 Rochester, N. Y. 35 1.04 .56 1.6 St. Louis, Mo. 247 2.96 .44 .6 St. Paul, Minn 24 .85 63 2.2 San Antonio, Tex.² 38 2.95 135 2.0 Sattle, Wash 98 2.95 135 2.0 Spracuse, N. Y 59 2.71 .35 1.6 Toledo, Ohio 66 2.17 48 1.6					
New Orleans, La.¹ 1 2 2 2 1 2 2 3 1, 257 1, 7 2 3 1, 12 23 9 9 0 0 1, 12 23 9 0 0 1 1 8 16 7 7 1 1 2 8 16 7 7 1 2 4 2 2 1 2 2 2 4 2 2 1 2 2 2 4 2 2 1 2			1. 15	115	2.36
New Orleans, La.¹ Ja.¹ New York, N Y 5,387 7,38 1,257 1.7 Oakland, Calif. 34 1,12 23 .9 Omaha, Nebr. 15 .68 16 .7 Philladelphia, Pa. 190 .96 .54 .2 Pittsburgh, Pa. 78 1,14 .28 .4 Portiand, Oreg.¹ .78 1,14 .28 .4 Providence, R. I. 73 2,82 .54 .2 Rochester, N. Y 35 1,04 .56 1,6 St. Louis, Mo. 247 2,96 .44 .6 St. Paul, Minn 24 .85 .63 .2 San Francisco, Calif. 198 2,95 135 .2 Seattle, Wash 98 2,88 106 4,3 Syracuse, N. Y 59 2,71 35 1,6 Toledo, Ohio 66 2,17 48 1,5		254	5.48	124	2, 68
New York, N.Y. 5,387 7,38 1,257 1,70 Oakland, Calif. 34 1,12 28 .9 Omaha, Nebr. 15 .68 16 .7 Philadelphia, Pa. 190 .96 .54 .2 Pittsburgh, Pa. 78 1,14 .28 .4 Portland, Oreg.i. .73 2,82 .64 .2 Providence, R. I. 73 2,82 .64 .2 Rochester, N.Y. 35 1,04 .66 1.6 St. Paul, Minn 247 2,96 .44 .6 St. Paul, Minn 24 .85 63 .2 San Antonio, Tex.³ .85 63 .2 San Francisco, Calif. 198 2,95 135 2,0 Seattle, Wash 98 2,88 106 4,3 Syracuse, N.Y. 59 2,71 35 1,6 Toledo, Ohio 66 2,17 48 1,6	New Orleans, La.1				
Oakland, Čalif 34 1.12 28 .9 Omaha, Nebr 15 .68 16 .7 Philadelphia, Pa 190 .96 .54 .2 Pittsburgh, Pa 78 1.14 .28 .4 Portland, Oreg. I 73 2.82 .54 .2 Rochester, N. Y 35 1.04 .56 1.6 St. Louis, Mo .247 2.96 .44 .6 St. Paul, Minn .24 .85 .63 .2 San Francisco, Calif .198 2.95 .135 .2.0 Seattle, Wash .98 2.58 .166 .4.3 Syracuse, N. Y .59 2.71 .35 1.6 Toledo, Ohio .66 2.17 .48 1.5	New York, N Y	5. 387	7.38	1. 257	1.72
Omaha, Nebr. 15 ,68 16 7 Philladelphia, Pa. 190 ,96 54 2 Pittsburgh, Pa. 78 1,14 28 .4 Portland, Oreg.¹ 73 2,82 54 2,0 Rochester, N. Y 35 1,04 56 1,0 8t. Louis, Mo. 247 2,96 44 .6 St. Paul, Minn 24 ,85 63 2 San Antonio, Tex.³ 2 2,95 135 2,0 Seattle, Wash 98 2,95 135 2,0 Syracuse, N. Y 59 2,71 35 1,6 Toledo, Ohio 66 2,17 48 1,6					
Philadelphia, Pa. 190 .96 .54 .2 Pittsburgh, Pa. 78 1.14 .28 .4 Portland, Oreg.¹ 73 2.82 .54 .2 Providence, R. I. 73 2.82 .54 .2 Rochester, N. Y. 35 1.04 .56 1.6 St. Paul, Minn 247 2.96 .44 .6 St. Paul, Minn 24 .85 63 .2 San Antonio, Tex.² 3 .8 .295 135 .2 Seattle, Wash 98 2.93 106 .43 Syracuse, N. Y 59 2.71 .35 1.6 Toledo, Ohio 66 2.17 .48 1.5					
Pittsburgh, Pa. 78 1,14 28 .4 Portland, Oreg.¹. 73 2,82 54 2,0 Rochester, N. Y. 35 1,04 56 1,6 St. Louis, Mo. 247 2,96 44 .6 St. Paul, Minn 24 85 63 2,2 San Antonio, Tex.¹ 86 63 2,2 San Francisco, Calif. 198 2,95 135 2,0 Seattle, Wash 98 2,58 106 4,3 Syracuse, N. Y. 59 2,71 35 1,6 Toledo, Ohio 66 2,17 48 1,5	Philadelphia Pa				
Portland, Oreg. 1. 73 2.82 54 2.0 Providence, R. I. 73 2.82 54 2.0 Rochester, N. Y. 35 1.04 56 1.6 8t. Louis, Mo. 247 2.96 44 .6 St. Paul, Minn 24 .85 63 2.2 San Antonio, Tex. 3. San Francisco, Calif. 198 2.95 135 2.0 Seattle, Wash. 98 2.88 106 4.3 Syracuse, N. Y. 59 2.71 35 1.6 Toledo, Ohio 66 2.17 48 1.5	Pittshurgh Pa				
Providence, R. I. 73 2.82 54 2.0 Rochester, N. Y. 35 1.04 56 1.6 St. Louis, Mo. 247 2.96 44 .6 6 St. Paul, Minn 24 .85 63 2.2 San Antonio, Tex.³ 24 .85 63 2.2 San Francisco, Calif. 198 2.95 135 2.0 Seattle, Wash 98 2.88 166 4.3 Byracuse, N. Y 59 2.71 35 1.6 Toledo, Ohio 66 2.17 48 1.5	Portland Oreg 1	10	1, 17		. 21
Rochester, N. Y. 35 1.04 56 1.6 St. Louis, Mo. 247 2.96 44 6 St. Paul, Minn. 24 .85 63 2.2 San Fancisco, Calif. 198 2.95 135 2.0 Seattle, Wash. 98 2.58 106 4.3 Syracuse, N. Y. 59 2.71 35 1.6 Toledo, Ohio. 66 2.17 48 1.5	Providence D T	*****	0.00		
8t. Louis, Mo. 247 2.96 44 .6 St. Paul, Minn 24 .85 63 2 San Antonio, Tex.³ San Franciseo, Calif 198 2.95 135 2.0 Seattle, Wash 98 2.88 106 4.3 Syracuse, N. Y 59 2.71 35 1.6 Toledo, Ohio 66 2.17 48 1.5	Dochastan M V				
St. Paul, Minn 24 ,85 63 2 2 San Antonio, Tex.³ 198 2.95 135 2.0 San Francisco, Calif. 198 2.95 135 2.0 Seattle, Wash 98 2.88 166 4.3 Byracuse, N. Y 59 2.71 35 1.6 Toledo, Ohio 66 2.17 48 1.5	Gt Tonic Me				
San Antonio, Tex.³ 2.95 San Francisco, Calif. 198 2.95 Seattle, Wash. 98 2.88 106 4.3 Syracuse, N. Y. 59 2.71 35 1.6 Toledo, Ohio 66 2.17 48 1.5					
San Francisco, Calif. 198 2.95 135 2.0 Seattle, Wash. 98 2.88 106 4.3 Syracuse, N. Y. 59 2.71 35 1.6 Toledo, Ohio 66 2.17 48 1.5	ot. rau, mun	24	, 85	63	2.23
Seattle, Wash 98 2.68 106 4.3 Byracuse, N. Y 59 2.71 35 1.6 Toledo, Ohio 66 2.17 48 1.5	San Antonio, Tex.				
Syracuse, N. Y	Ban Francisco, Calif				
Toledo, Ohio 66 2.17 48 1.50	Seattle, Wash		2.58		4.37
Toledo, Ohio 66 2.17 48 1.50 Washington, D. C.1	Syracuse, N. Y	59		35	1.61
Washington, D. C.1	Toledo, Ohio	66	2 17	48	1. 58
	Washington, D. C.1	1			

No report for current month.
 Not reporting.
 Incomplete.
 Only cases of syphilis in infectious stage reported.
 Reported by the Jefferson Davis Hospital. Physicians are not required to report venereal diseases.

1513 October 30, 1986

WEEKLY REPORTS FROM CITIES

City reports for week ended Oct. 10, 1936

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

	Diph-	Infi	uenza	Mea-	Pneu-	Scar- let	 Small-	Tuber-	Ty- phoid	Whoop-	Deaths,
State and city	theria cases	Cases	Deaths	sles cases	monia deaths	fever cases	cases	culosis deaths	fever cases	cases	all causes
Maine:											
Portland	0		0	0	3	3	0	0	0	0	26
New Hampshire:	١.	l	ا م				١.	ا م	_	0	۰
Concord Manchester	0		0	0	1 2	4	0	0	0	8	17
Nashua	ĭ			ŏ	-	ŏ	l ŏ	١ ١	ŏ	Ĭŏ	- "
Vermont:	•			•		Ů	ľ		ľ	ľ	
Barre		1									<u>-</u>
Burlington	9		0	0	0	0	0	0	0	0	8
Rutland Massachusetts:	0		0	U	0	U	0	0	0	٠ ،	٥
Boston	0		1	7	22	23	1 0	7	0	69	214
Fall River	ŏ		0	0	1	0	Ó	1	0	0	27 33
Springfield	0		0	0	3	4	0	0	1	3	33
Worcester	1		0	2	7	6	0	1	0	13	45
Rhode Island: Pawtucket	0	1	0	0	اه	0	0	0	0	0	17
Providence	ŏ		ŏ	ŏ	2	11	lŏ	ĭ	ĭ	5	57
Connecticut:				-	1		l			1	
Bridgeport	0		0	1	1	1	0	0	0	3	31
Hartford	0		0	0	0	7	0	9	1	12 3	30 43
New Haven	0		0	1	1	1	0	0	٠	•	70
New York:		1 1					1				
Buffalo	3		0	2	7	6	0	4	1	4	108
New York	15	6	5	21	78	46	0	82	34	85	1, 393
Rochester	0		0	0	2 2	9	0	0	9	0 18	56 49
Syracuse New Jersey:	U		ا "	•	- 1		, v	"		13	73
Camden	6	lI	0	1	2	0	0	0	1	0	25
Newark	0		1	1	3	1	Ó	2	0	19	25 75 27
Trenton	0		0	0	1	1	0	1	0	0	27
Pennsylvania:		1 1	2	2	12	28	0	28	8	105	435
Philadelphia Pittsburgh	4	i	1	2	12	34	ŏ	5	ő	28	146
Reading	ő		٥l	ĩ	- î l	ő	ŏ	3	ě	10	38
Scranton	ĭ			Ö		Ŏ.	0		9	1	
			I		1	1		1		1	
Ohio: Cincinnati	2		1	0	4	8	0	13	1	1	146
Cleveland	3	9	ō	2	15	25	ŏ	15	ô	31	197
Columbus	4	ĭ	ĭ	0	4 !	12	Ó	1	2	18	119
Toledo	0		0	4	3	6	9	2	0	15	60
Indiana:						1			0	1	9
Anderson Fort Wayne	0 2		8	0	1	1 0	0	1 0	ŏ	o l	99
Indianapolis	3		ŏl	0	6	11	ŏ	ŏ	ŏ	ě	86 21
Muncie	0		0	θ	1 1	0 1	0	0	0	0	21
South Bend	0 1		0	0	11	0	0	0	0		14
Terre Haute	0		0	0	0	- 0	0	0	0	0	11
Illinois:	0		0	0	0	2	0 1	0	0	0	2
Chicago	3 0	4	3	4 1	31	69	O I	28 1	0	61	694
Elgin	9]	ō l	0	1	0	0	0	0	1	11
Moline	0		0	0	1 0	3 4	0	0	0	1	8 16
Springfield Michigan:	Ð		0	٠,	۰,	• 1	۰	١	١	- 1	10
Detroit	5	2	0	4	11	47	0	11	3	73	254
Flint	1		0	0	0	1	0	1		8	27
Grand Rapids.	0]		2	2]	0	12	0	2	•	8	39
Wisconsin:	اہ	- 1		1		11	0	اه			10
Kenosha Madison	0		6	ė		*	ŏl	8	9	2	15
Milwaukee	4	1	ĭ	1	5 1	26	O I	4	1	23	95
Racine	0		Ō	0	1	3	0	1	1	41	14 7
Superior	0		0	0	9	1	0	0	•	5	7
Minnesota:	I	1	- 1	ł	1	1	- 4	- 1	I	- 1	
Duluth	0	1	0	3	0	2	0	0	0	6	23
Minneapolis	0		0 1	2	3 5	3	0	11	0 !		109 50
St. Paul	0 1	1	0 1	ō l	5	6	0]	3]	ě l	16	99

City reports for week ended Oct. 10, 1936—Continued

	Diph-	Inf	luenza	Mea-	Pneu-	Scar- let		Tuber-	Ty- phoid	Whooping	Dogues,
State and city	theria cases	Cases	Deaths	sles cases	monia deaths	farrer	pox cases	culosis deaths	fever cases	cases	causes
Iowa:											
Cedar Rapids	0			0		1	0		9	0	
Davenport	0			0		1 1	0 0 2		0	0	
Des Moines Sioux City	8			0		0 3	9		0	8	19
Waterloo	2			ŏ		ŏ	ő		ŏ	š	
Missouri:	Ι.		1	١.		١.		١ .			
Kansas City St. Joseph	1		0	1	3	6	0	2	0	0	70
St. Louis	5		1	i	3	21	0	8	5	19	206
North Dakota:		l			ا م					١.	١.
FargoGrand Forks	0		0	0	0	3 2	0	0	0	0	4
Minot	ŏ		0	ŏ	0	ō	ĭ	0	ŏ	ŏ	10
South Dakota:						_	١ .				
Aberdeen Sioux Falls	0		0	0	0	0	0	0	0	0	12
Nebraska:			1			•	İ	1 1		ľ	
Omaha	0		0	0	3	4	0	2	0	0	50
Kansas: Lawrence	o	l	0	0	0	0	0	0	0	0	ا ه
Topeka											
Wichita	2		0	0	2	3	0	0	0	0	28
Delaware:					1		ł				! .
Wilmington	1		0	4	3	0	0	2	1	4	34
Maryland:								i i		1	i
Baltimore	0	4	0	0	10 1	15 4	0	16 0	2	105	195
Cumberland Frederick	ŏ		ŏ	ŏ	اةا	ō	ŏ	ŏ	ŏ	0	19 5
District of Col.:	- 1		1		1				-		l
Washington	10		0	5	11	7	0	14	2	33	173
Virginia: Lynchburg	2		0	1	1 1	1	0	0	0	0	19
Norfolk	1		Ó	4	5	1	0	1	Ó	ŏ	31
Richmond	0		0	0	3 2	3	0	0	1	1	51
Roanoke West Virginia:	4		0	0	2	0	0	1	0	0	18
Charleston	1		0	0	2	1	0	1	2	0	. 32
Huntington	3		0	0	0	8	0	1	0	0	. 0
Wheeling North Carolina:	0		0	0	2	1	0	0	0	1	10
Gastonia	0			0		1	0		0	0	
Raleigh	0		0	0	0	0	Ŏ,	0	0	0	16
Wilmington Winston-Salem	3 2		0	0	0 2	2 1	0	1 0	0	0	8 14
South Carolina:									- 1	۰	1.5
Charleston	1	2	0	0	0	0	0	2	0	0	18
Columbia Florence	ō		·ō	·ō	0		ō			ō	4
Greenville	ŏ		ŏ	ŏ	ĭ	ŏ	ŏ	ŏl	ŏl	ŏ	17
Georgia:		_	_	_		_		- 1			
Atlanta Brunswick	4	7	3	0	4	7	0	3 0	0	1 0	93 3
Savannah	ō	i	ŏl	ŏ	ŏl	ŏl	ŏ	ŏl	ŏ	3	39
Florida:			1			- 1				1	
Miami	8	1 1	0	0	1 2	1	0	2	8	2	. 21
Tampa	١ ٠	- 1	- 1	۳۱	-	- 1	١	- 1	۱۳	١	25
Kentucky:	_		ı	_ [1	_ [_ [i	_ [!	
Ashland	0		ō	0		0	0	2	0	0	
Covington Lexington	ŏ		ŏ	ŏ	ĭ	8	ŏ	. 2	i	0	13 24
Louisville	4		2	ŏ	8	ĭ	ŏ	ō	Ž	13	53
Tennessee:		1			ا ا	_ ,	ا م	ا ا		ا ا	•
Knoxville Memphis	8		0	1	2 4	9	8	2 2	1 1	8	24 57
Nashville	i		ĭ	ō	3	ŏ	ŏ	ō	ō	ŏl	56
Alabama:			ا ا	ا ۽	. 1	ا ا			_ 1		
Birmingham Mobile	2		0	0	5 8	2 0	0	6	0	8	55 25
Montgomery	3			ŏ		ŏ	ŏ		ŏ	öl	
				1		- 1			- 1	1	
Arkansas: Fort Smith	1	1	[o l	1	3	اه	- 1	o	0	· 1
Little Rock	ő			öl	i	ő	ő i	8	ö	ŏ l	4
Louisiana:			i	- 1	- 1	- 1				I	7. A
Lake Charles	0	2	. 0	0	1 9	1	0	10	0	0	4
New Orleans Shreveport	õ	-	δl	ŏl	5	ě	ŏ	14	. 8	0	162 36

City reports for week ended Oct. 10, 1936—Continued

State and city	Diph-	Infl	uenza	Mea-	Pneu- monia	Scar- let	Small-	Tuber-	Ty- phoid	Whoop-	Deaths,
	cases	Cases	Deaths	cases	deaths	fever cases	cases	deaths	fever cases	cough	causes
Oklahoma: Oklahoma City Tulsa	2 1	21	0	0	3	2 2	0	0	0 1	0	32
Texas: Dallas Fort Worth Galveston Houston San Antonio	4 3 1 6 1	1	1 0 0 1 2	0 1 0 0	6 4 0 2 2	2 0 0 2 0	0 0 0 0	3 1 0 4 6	0 1 1 3 0	2 0 0 3 0	67 34 9 65 62
Montana: Billings Great Falls Helena Misseula Idaho:	0 0 0		0 0 0	0 0 0 0	1 1 0 2	0 1 0 0	1 1 0 0	0 0 0 0	0 0 0	0 3 0 1	6 7 6 7
BoiseColorado: O o l o r a d o Springs	0		0	0	0	1	0	0	0	0	6 7
Denver Pueblo New Mexico:	6 1 0		0	0	3 2 2	8 0 2	0	6 0	1 2	43 0	95 11 23
Utah: Salt Lake City. Nevada: Reno.	0		0	2	1	6	0	2	0	7	48
Washington: Seattle	0 0 0		1 0 0	5 0 0	4 1 1	6 11	0 3	5 0 2	0 0 1	3 0 3	S 102 22 37
Portland Salem California:	0	1	1	1 0	9	7	0	0	0	4	
Los Angeles Sacramento San Francisco	10 2 0	11 1	2 0 1	1 0 1	12 1 2	7 31 10	0	16 0 12	1 0 0	33 9 21	298 24 154

State and city		gococcus ngitis	Polio- mye- litis	State and city		gococcus ngitis	Polio- mye- litis
•	Cases	Deaths	cases	-	Cases	Deaths	Casas
New York: New York Rochester Syracuse Pennsylvania: Pittsburgh Chio: Cleveland Columbus Toledo Indiana: Anderson Indianapolis Illinois: Checago	6 0 0 1 0 0 0	2 0 0 0 1 0 0	0 1 1 0 4 2 15	Missouri: St. Louis Maryland: Baltimore District of Columbia: Washington Tennessee: Knoxville Memphis Nashvillo Alabama: Birmingham Mobile Louisiana: Shreveport	0 1 1 1 0 1	0 2 0 0 2 0	1 0 1 1 1 2 2
Elgin	ō	ô	1	Colorado: Denver	0		1
Detroit	1 0	2 9	3 1	Washington: Spokane Oregon:	0	0	1
Milwankse	0	9	1	Portland California: San Francisco Can Franc	0	0	1
Des Moines	. 0	١٥	1	Los Angeles	0		

Epidemic encephalitis.—Cases: New York, 1.
Pellagra.—Cases: Washington, 1; Atlanta, 1; Savannah, 3; Los Angeles, 2.
Typhus fever.—Cases: New York, 1; Savannah, 6; Dallas, 2.

FOREIGN AND INSULAR

CANADA

Manitoba—Poliomyelitis.—During the week ended October 17, 1936, 10 new cases of poliomyelitis were reported in the Province of Manitoba, Canada, making a total of 355 cases. No new cases were reported in Winnipeg.

Provinces—Communicable diseases—2 weeks ended October 3, 1936.—During the 2 weeks ended October 3, 1936, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada, as follows:

Disease	Prince Edward Island	Nova Scotia	New Bruns- wick	Quebec	Ontario	Mani- toba	Sas- katch- ewan	Alberta	British Colum- bia	Total
Cerebrospinal meningitis. Chickenpox Diphtheria Dysentery Erysipelas Influenza Measles. Mumps. Paratyphoid fever Pneumonia. Poliomyelitis Scarlet fever Trachoma Tuberculosis Typhoid fever Undulant fever Undulant fever Whooping cough	1	10 1 2 4 4 1 15 3 1	1 1 1 8 8 20 5 5 2	30 170 55 1 7 70 30 140 86 32	1 196 12 2 3 3 21 347 189 4 13 53 172	444 7 555 9 147 98 20 10	57 55 95 1 84 21 4 17 87 30 5	35 1 1 61 9 1 1 98	88 7 32 55 8 3 41 14 45 3	4 590 91 98 19 22 652 287 6 266 250 609 14 290 97 1

JAMAICA

Communicable diseases—4 weeks ended October 3, 1936.—During the 4 weeks ended October 3, 1936, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chickenpox Dysentery Erysipelas Leprosy	3	3 2 3 5	Puerperal septicemia	1 30 7	1 85 100

VIRGIN ISLANDS

Notifiable diseases—July-September 1936.—During the months of July, August, and September 1936, cases of certain notifiable diseases were reported in the Virgin Islands as follows:

Disease	July	August	Septem- ber	Disease	July	August	Septem- ber
Dengue Diphtheria Filariasis Gonorrhea Malaria Measles Pellagra	16 16 2	1 6 15 1 5	2 8 13 2 2 1	Schistosomiasis	2 7 1 5 6	1 6 2	4 2 1 4

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

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

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

	,	76.	1	,						Week	Week ended-						
Place	Mar. 1- 28, 1936	Apr. 25, N	May 30,	May 31- June 27,		July 1936	936			Augu	August 1936			Sept	September 1936	1936	
					7	ıı	18	8			15		8	- 1	21	9	8
Afghanistan.i Ceylon: Batticalea.i Profines		ă									<u> </u>				<u> </u>	<u> </u>	
	16, 605 7, 988	24,028	21, 278 10, 634	15, 291	880 880 880	250 200 2,50	288 198		318 4,	4.0	205	200	202				
10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	28	75.58		83	88	9=	28	124	82	48	88	<u> </u>	88	£84	25		
Bombay Fresidency.	130 55	145 24	288	2822	722	230	<u> </u>	58	313	28	761	- 828 328	288	8.3	<u> </u>		
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Indochina (French) (see also table above): Cambodia '. Cochinchina '. D	4100	1 7 7	11	HH	8877	нен	11	44		888	8888	1			

• During the week ended Oct. 10, 1936, cholera was reported present in Zurmat Province, Afghanistan.
• During the week ended Oct. 10, 1936, 3 cases of cholera were reported in Batticaloa, Ceylon.
• Imported.
• Barportes
• Berports incomplete.

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

PLAGUE!

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

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				,						Week	Week ended-	1					
Place	Mar. 1728, 1936	Mar. 29-Apr. 25, 1936	Apr. 26- May 30, 1936	May 31- June 27, 1936		July 1936	1936			Aug	August 1936	۰		Sep	September 1936	r 1936	
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Plague-infected rats	1	1		8	1	8	F	Ħ	Ī	1		F			•		7

91792°--36-

Including plague in the United States and its possessions.
Suspected.

* A report dated July 29, 1936, states that 23 cases of pneumonic plague with 18 deaths were reported in Sao Paulo, Brazil.

* A report dated Aug. 20, 1936, states that 2 cases of plague were reported at Kirin Province, Menchuria, China.

* A report dated Sept. 3, 1936, states that 2 plague-infected rats were reported in Mercellig, Finnce.

* Plague-infected rats have been reported in Brawnil Territory. Bawaii Laind, Hemskus District, as follows: Week ended Aug. 8, 2 plague-infected rats, no location given: week ended Oct. 10, 1 plague-infected rat, in Pasaubau sector.

* For 2 weeks.

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

PLAGUE-Continued

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

										Week	Week ended—						1
Place	Mar. 1-28 1936	Mar. 29-Apr. 25, 1936	Apr. 26- May 30, 1936	May 31- June 27,		July 1936	1936			Aug	August 1936			Sei	temb	September 1936	1
				3	4	1	18	8			15	23	8		21	91	8
United States: California: Lassen County—Plague-infected squirrels Modoc County 1—Plague-infected squirrels Monstey County 9 Placer County 9			•	1333		-			01				<u> </u>				
ue-infected squirrels. C Infected squirrels. gue-infected squirrels.				8 44	•			φ									
Newaga Erko County—Flague-infected squireds. Beaver County. Plague-infected marmots. Plague-infected squireds. Garfael County 14—Plague-infected prairie dogs. Sevier County 16			4		1		-			7 67		 					
On vessely: S. I penema at Marsellie from Bone and Philip- Deville S. S. Delumbre at Liverpool from Montevideo, Buenes Aires, Rosarlo, Santos, and Las Pelmas—Plague- infected rats.											1			69			
			-				1		-	-	1	-	-	-	1		1

* Plague-Infected fiess have been reported in California as follows: Week ended June 27, 1936, 3 lots in Modoe County, and 7 lots in Santa Cruz County; Aug. 18-71, 104 plague-infected free follows ground againtee in Moniterey County and from elipmunts and ground squirrels in Place County have been proved plague infected.

• During the week ended July 25, 1936, 153 flees and 25 lice taken from 7 marmots (ground hogs) shot at the bead of Small Horn Canyon, Beaverhead County, Mont., were reported plague infected.

• Plague-infected flees in Utah have also been reported as follows: Aug. 24, 45 flees taken from 25 prairie dogs in Garfield County, and July 26, 1996, 316 flees taken from 1 ground squirrels in Clear Creek Canyon, Sevier County.

Place	March 1936	March April 1936 1936	May 1936	June 1936	July 1936	August 1986	Place	March 1936	April 1936	May 1936	June 1936	July 1983	August 1986
Argentina: Salta Province San Luis Province O Tucuma Province		80	- 1	•	4 -		Peru Libertad De partment C Lima Department C Calleo C Calleo C C C C C C C C C C C C C C C C C C C	Ö-184	15 6 6	24 H	1 12	→ ∞−	9 → 11
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Cochinchina Cochinchina Madagascar (central region) D	206 196	8 8	1-84	882	******		Thies 13. C. Traouane 14. C. South-West Africa: Ovamboland C.		-	ಚಿತ್ರಾ	1-4	eo .	7

11 From January to August 31, 1936.

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

SMALLPOX

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

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		Z	Ju V	Mα					Wee	Week ended-	Ţ						
Place	Mar. 1-28. 1936	4 7 %	% % 30,	31- June 27,		July 1936	936			Aug	August 1936	6		ď	ptemb	September 1986	
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For 2 weeks.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS PEVER, AND YELLOW FEVER-Continued

SMALLPOX-Continued

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

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		Mar.	Apr.	Мву					Week	Week ended-						
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CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER-Continued

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

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Place	Mar. 1-28, 1986	Mar. 29-Apr. 26, 1936	Apr. 26-May 30, 1936		June 1936	1936			July 1936	936			γng	August 1936	_		September 1936	nber 1	986
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For 6 weeks. For 5 weeks.

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

TYPHUS FEVER—Continued

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

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	Mexico—Continued. Puebla State: Fuebla Quetara State: Fuebla San truis Fotosi Fotosi Fotosi Sinalos State Thacada State Thacada State Forum Morroco (see also table above) Peru Rumania Canal Zone Forumal (see also table above) Rumania Union of South Africa: Cape Province Natal Transvaal Transvaal		Week ended-		8	
Place	Mexico—Continued. Puebla State: Puebla. Sulvertaro State. Sulvertaro State. Sulvertaro State. Potosti. Sinalos State. Moroco (see also table abov Peru. Peru. Peru. Peru. Peru. Peru. Cape peru (see also table abov Rumania. Union of South Afros: Cape Province. Cape Province. Cape Province. Cape Province. Cape Province. Orange Free State. Transval.		₿	July 1986	81	
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Yellow fever has been reported in Santa Cruz Department, Bolivia, as follows: For the months of February, 2 cases; March, 10 cases; April, 1 case; May, 1 case; June, 2 cases. 2 cast Syelow fever has also been reported in Brazil as follows: Parana State, Feb. 16-25, 1936, 5 cases, 2 deaths.

Includes 1 case of yellow fever reported in the city of Sao Paulo, Brazil.

Yellow fever has also been reported in Colombia as follows: Boyeca Department, Jan. 4 to May 15, 9 deaths; Restrepo, June 4 to July 26, 6 deaths; Villavicencio, January, June, and July, 6 deaths; Santander Department, June and July, 6 deaths.