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ABSENTEEISM BECAUSE OF SICKNESS IN CERTAIN SCHOOLS IN CLEVELAND, 1922-23.¹

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In a previous paper² the general results of a study of absenteeism among school children were presented. This study was conducted in two schools of Cleveland and included 1,611 pupils with a total possible school attendance of 214,256 days. It was found by including only absences of two days duration or over, a procedure adopted for the investigation, that 6,362 days of school were lost because of sickness, and the present paper deals with an analysis of this lost time.

Among the points brought out in the first paper were the following:

1. Negro children irrespective of sex and age lost less time from school than white children because of sickness.
2. There was indicated a slight tendency for girls to lose more time from school than boys because of sickness.
3. The older age group (10-14) lost less time from school than the younger age group (5-9) because of sickness.

The question naturally arises as to whether these conditions hold when a method of analysis making use of case rates is employed. It seemed preferable to express these rates as the number of cases per 10,000 possible days of school attendance rather than in the usual way of relating the cases to the number of persons exposed. This method was adopted because of the fact that the school enrollment is constantly changing, so that the figure representing the total number of children for the year includes many who were connected with the schools for only a short time. The liability of absence, therefore, is more accurately expressed when related to the total possible days of school attendance to which each pupil contributed in proportion to the length of his enrollment than when related to the number of students. Table 1 presents general information, and in columns 8 and 9 are found case rates computed as just described for white and negro children for each sex and certain age groups.

¹ From the Department of Hygiene and Bacteriology, School of Medicine, Western Reserve University and the Department of Attendance, Cleveland Board of Education.

² Absenteeism among white and negro school children in Cleveland, 1922-23. By G. E. Harmon and G. E. Whitman. Pub. Health Rep., 39, 12, pp 559-567. Reprint No. 908.

TABLE 1.—General morbidity data.

Sex and age.	Number of children— Total for school year.		Total possible days of school attendance.		Total cases of sickness during school year.		Cases per 10,000 possible days of school attendance.	
	White.	Negro.	White.	Negro.	White.	Negro.	White.	Negro.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Both sexes:								
All ages.....	918	698	126,433	87,813	728	309	57.6	35.2
5-9 years ¹	541	297	72,029	37,407	495	167	68.7	44.6
10-14 years ²	377	396	54,404	50,406	233	142	42.8	28.2
Male:								
All ages.....	458	309	63,786	44,906	343	138	53.8	30.7
5-9 years ¹	274	143	37,140	17,693	250	74	67.4	41.8
10-14 years ²	184	226	26,646	27,213	93	64	35.0	23.5
Female:								
All ages.....	460	324	62,647	42,907	385	171	61.5	39.8
5-9 years ¹	267	154	34,889	19,714	245	92	70.2	47.3
10-14 years ²	193	170	27,758	23,193	140	78	50.4	33.6

¹ Includes a few of undetermined age.² Includes a few over 14.

The rates in columns 8 and 9 of Table 1 substantiate the results obtained by the method of analysis first used: the case rates for negro children are seen to be less than those for white children; the case rates are higher for females than for males; and the older age group exhibits smaller case rates than the younger age group. It follows from the above that the loss of a smaller amount of time from school by the negro children because of sickness as compared with that lost by the white children is due to some extent to the occurrence of fewer cases.

In considering the causes of absences due to sickness it was found to be most desirable to group the numerous reasons assigned under relatively few heads. The classification of causes appearing in Table 2 was the one finally adopted. While most of the headings of this classification are definite and clearly indicate the nature of the cases included, there are a few which need some explanation. Under the heading "respiratory infections" were included the cases ascribed to bronchitis, cold, grippe, flu, influenza, pneumonia, and sore throat, or, in other words, general infections of the respiratory tract. Under "tonsils (diseases of)" were included cases due to tonsillitis and removal of the tonsils. When the cause was so poorly stated as to have no definite meaning, the case was placed under the heading "Cause not given and ill-defined." Under "miscellaneous" were grouped those cases due to causes which were infrequent, such as asthma, appendicitis, boils, Bright's disease, chorea, croup, constipation, felon, goiter, headache, ivy poisoning, laryngitis, rheumatism, sumac poisoning, tuberculosis, vaccination, and worms.

TABLE 2.—Morbidity data classified as to cause.

Cause. (1)	White.			Negro.			Both races.		
	Total cases. (2)	Total days of school lost. (3)	Per cent of all days lost because of ascertained sickness. (4)	Total cases. (5)	Total days of school lost. (6)	Per cent of all days lost because of ascertained sickness. (7)	Total cases. (8)	Total days of school lost. (9)	Per cent of all days lost because of ascertained sickness. (10)
Respiratory infections.....	394	1,883	47.2	139	651	41.0	533	2,534	45.4
Measles.....	53	521	13.0	24	288	18.2	77	809	14.5
Scarlet fever.....	21	463	11.6	2	56	3.5	23	519	9.3
Chicken pox.....	53	470	11.8	3	30	1.9	56	500	9.0
Tonsils (disease of).....	34	225	5.6	27	153	9.7	61	378	6.8
Miscellaneous.....	19	181	4.6	15	68	4.3	34	249	4.5
Accident and injury (general).....	7	51	1.3	9	65	4.1	16	116	2.1
Digestive system(diseases of).....	28	90	2.3	8	21	1.3	36	111	2.0
Ringworm.....	.....	.....	.....	5	111	7.0	5	111	2.0
Whooping cough.....	.....	.....	.....	5	88	5.6	5	88	1.6
Diphtheria.....	3	42	1.0	3	19	1.2	6	61	1.1
Accident (auto).....	2	9	.2	3	24	1.5	5	33	0.6
Teeth (disease of).....	6	20	.5	4	10	.6	10	30	.5
Ear (disease of).....	5	17	.4	1	2	.1	6	19	.3
Eye (disease of).....	5	12	.3	.....	.....	.....	5	12	.2
Mumps.....	3	9	.2	.....	.....	.....	3	9	.1
All ascertained causes.....	633	3,993	100.0	248	1,586	100.0	881	5,579	100.0
Cause not given and ill-defined.....	95	511	.....	61	263	.....	156	774	.....

It is readily seen from Table 2 that for both white and negro children respiratory infections and measles were the most important causes of sickness. When both races are considered, scarlet fever and chicken pox come next in importance. It should be noted, however, that among the negro children there were very few cases of these last-named infections, whereas among the white children chicken pox was almost as important a cause of absence as measles. The four conditions—respiratory infections, measles, scarlet fever, and chicken pox—were responsible for 83.6 per cent of the days lost because of sickness due to ascertained causes among white children, and for 64.6 per cent among negro children. Attention is called to the fact that cases of diphtheria were surprisingly few, that there were no cases of ringworm or whooping cough among the white children, and that there were no cases of mumps or disease of the eye among the negro children. As shown by the rates in columns 4 and 7 of Table 3, the negro children have more favorable rates, except for the following causes: Accident and injury (general), ringworm, whooping cough, and accident (auto).

TABLE 3.—Days of school lost for certain causes per 10,000 total possible days of school attendance.

Cause.	White.			Negro.			Both races.		
	Age 5-9. ¹	Age 10-14. ²	All ages.	Age 5-9. ¹	Age 10-14. ²	All ages.	Age 5-9. ¹	Age 10-14. ²	All ages.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Respiratory infections.....	182.0	106.5	149.0	104.7	51.6	74.2	155.0	79.4	118.5
Measles.....	79.7	2.2	41.2	56.5	16.1	32.8	65.5	8.9	37.8
Scarlet fever.....	46.5	23.8	36.6	15.0	0.0	6.4	35.6	12.3	24.2
Chicken pox.....	60.2	6.8	37.2	6.1	1.4	3.4	41.7	3.8	23.4
Tonsils (disease of).....	24.1	9.4	17.8	18.2	16.9	17.4	22.1	12.9	17.7
Miscellaneous.....	9.6	21.1	14.4	12.8	4.0	7.7	10.7	12.6	11.7
Accident and injury (general).....	0.6	8.6	4.1	11.5	4.5	7.5	4.3	6.6	5.5
Digestive system (diseases of).....	4.9	10.2	7.5	2.0	2.8	2.4	3.9	6.6	5.2
Ringworm.....	0.0	0.0	0.0	19.9	7.3	12.7	6.8	3.5	5.2
Whooping cough.....	0.0	0.0	0.0	23.5	0.0	10.0	8.0	0.0	4.1
Diphtheria.....	5.8	0.0	3.3	4.0	0.8	2.2	5.2	0.4	2.8
Accident (auto).....	0.0	1.7	0.7	1.6	3.7	2.8	0.5	2.6	1.6
Teeth (diseases of).....	1.5	1.7	1.6	1.3	1.1	1.2	1.5	1.4	1.4
Ear (diseases of).....	2.4	0.0	1.4	0.7	0.0	0.3	1.8	0.0	0.9
Eye (diseases of).....	1.3	0.6	0.1	0.0	0.0	0.0	0.9	0.3	0.6
Mumps.....	1.2	0.0	0.7	0.0	0.0	0.0	0.8	0.0	0.4
Cause not given and ill-defined.....	51.8	25.4	40.4	38.2	23.9	30.0	47.2	25.1	36.2
All causes.....	462.5	216.5	357.0	315.5	134.0	211.0	413.0	176.4	297.0

¹ Includes a few of undetermined age.

² Includes a few over 14.

A study of columns 2, 3, 5, and 6 of Table 3 brings out the fact that the older age group had lower rates than the younger for most of the causes listed. This general result agrees with what has been previously shown to be true when total time lost on account of sickness is considered. The following exceptions to the statement just made, however, should be noted. Among the white children the older age group had higher rates than the younger for the following causes: Miscellaneous, accident and injury (general), digestive system (diseases of), accident (auto), and teeth (diseases of). Among the negro children the older age group had the higher rates for the following causes: Digestive system (diseases of), and accident (auto).

In collecting the data relating to cases of sickness, an attempt was made to ascertain the type of attention which each case received. The results of this part of the investigation are presented in Table 4. It is noted that a much larger percentage of cases among white children were attended by regular physicians as compared with the cases known to have received such attention among the negro children.

TABLE 4.—Per cent of total cases for which information was obtained, receiving a given type of attention.

Type of attention.	White.	Negro.
None.....	37.5	54.6
Regular physician.....	61.0	22.7
Other attendant.....	1.5	22.7

In Table 5 there is presented the frequency distribution of the duration of cases of sickness measured in school days lost, which data were used in computing certain of the probable errors dealt with below. In calculating these constants, because of the relatively few absences which were not of whole-day duration, it was considered that sufficiently accurate results would be obtained by using the initial values of the various groups as midpoints rather than the real midpoints of the groups. The data presented clearly show that while there were some absences of quite long duration the majority lasted for only a few days.

TABLE 5.—Frequency distribution of the duration of cases of sickness measured in school days lost.

Duration of sickness in school days lost.			White.				Negro.			
	White.	Negro.	Male.		Female.		Male.		Female.	
			5-9 ¹	10-14 ²	5-9 ¹	10-14 ²	5-9 ¹	10-14 ²	5-9 ¹	10-14 ²
2 and less than 3	184	82	53	34	60	37	19	17	16	30
3 and less than 4	121	58	36	17	33	35	9	11	22	16
4 and less than 5	72	35	22	7	24	19	10	12	5	8
5 and less than 6	108	43	38	15	31	24	11	6	17	9
6 and less than 7	34	15	16	3	10	5	2	3	5	5
7 and less than 8	34	13	11	4	14	5	4	5	2	2
8 and less than 9	24	6	11	1	9	3		1	4	1
9 and less than 10	26	5	11	1	10	4	1		2	2
10 and less than 11	33	15	17	1	15		5	4	4	2
11 and less than 12	13	4	1	1	9	2	1	1	1	1
12 and less than 13	13	3	7	2	4		1		2	
13 and less than 14	6	3	2		4				3	
14 and less than 15	9	4	7		2		1	2	1	
15 and less than 16	8	4	2	1	3	2	1	1	2	
16 and less than 17	2	4			1	1	2		2	
17 and less than 18	4			2	1	1				
18 and less than 19	5	1	4		1		1			
19 and less than 20	8	2	2	1	4	1	1	1		
20 and less than 21	5	2	2	1	2				1	1
21 and less than 22	1				1					
22 and less than 23	2		1		1					
23 and less than 24	2				2					
24 and less than 25		1					1			
25 and less than 26	2	3	1		1		1		1	1
26 and less than 27	2			1	1					
28 and less than 29	1	2	1						2	
30 and less than 31	1				1					
33 and less than 34		1							1	
34 and less than 35	1			1						
35 and less than 36	1	1	1				1			
36 and less than 37		1					1			
38 and less than 39	2		2							
39 and less than 40		1					1			
45 and less than 46	1					1				
47 and less than 48	2		2							
58 and less than 59	1			1						
	728	309	250	93	245	140	74	64	93	78

¹ Includes a few of undetermined age.

² Includes a few over 14.

Among white children of all sex and age groups the average duration of cases was 6.18 ± 0.15 days of school, whereas among the negro children this average was 5.98 ± 0.22 . The difference between these two averages is 0.20 ± 0.26 , the probable error being larger than the

difference. This result indicates that there is no significant difference between the average time lost from school per case of sickness when white and negro children are compared. Since this is so, the smaller relative amount of total time lost from school because of sickness by negro children must be due to the smaller number of cases which occurred among them. This result agrees with the deduction made from Table 1.

It has now been shown for the group studied that not only did the negro children proportionally lose less time from school because of sickness than did the white children, but also that a relatively smaller number of cases of sickness occurred among them than among white children. A superficial consideration of these facts as shown for the group of school children studied, might lead to the conclusion that negro children are less subject to disease than are white children. Because of the small sample studied, however, if for no other reason, such a conclusion is unjustified. Then, too, only those cases of sickness which resulted in two days or more of absence from school have been considered. Since the total number of cases of sickness among the school population was not determined, mild cases were probably not recorded, with the result that the number of cases included depended to some extent upon severity. It may well be mentioned that severity measured by the number of days lost from school may depend upon the attitude of parents toward illness among their children rather than upon any inherent resistance or susceptibility to disease. Do white parents keep their children out of school for a longer time than do colored parents on account of differences in social, economic, or other conditions? If this is the case, some explanation is available for such of the results obtained in this study as are at variance with what might be expected to be true concerning the actual extent of morbidity among the white and negro children.

TABLE 6.—Average duration of cases of sickness measured in days of school lost.

Race and age groups.	Average duration of cases of sickness.		Difference.
	Male.	Female.	
White:			
5-9 years.....	6.86±0.28	6.59±0.23	0.27±0.36
10-14 years.....	5.54±0.49	4.73±0.26	0.81±0.55
Negro:			
5-9 years.....	7.41±0.62	6.77±0.42	0.64±0.75
10-14 years.....	5.17±0.30	4.41±0.28	0.76±0.41

In Table 6 the average duration of cases of sickness is so presented as to make possible an evaluation of the influence of sex. While a consideration of the column headed "Difference" suggests that there is possibly no significant difference in the duration of cases among

boys and girls, the probable error being almost as large as or greater than the difference, nevertheless it should be noted that the average duration of cases of sickness for females is consistently slightly less than that for males.

TABLE 7.—Average duration of cases of sickness measured in days of school lost.

Race and sex.	Average duration of cases of sickness.		Difference.
	Age, 5-9.	Age, 10-14.	
White:			
Male.....	6.86±0.28	5.54±0.49	1.32±0.56
Female.....	6.59±0.23	4.73±0.26	1.86±0.35
Negro:			
Male.....	7.41±0.62	5.17±0.30	2.24±0.69
Female.....	6.77±0.42	4.41±0.28	2.36±0.50

Table 7 is arranged to show the effect of age upon the duration of sickness. It is shown that the average duration of cases of sickness is shorter in the older age group than in the younger group. That the differences between these two groups is significant is evident from the last column of the table, where it will be seen that their differences are from 2.3 to 5.3 times the corresponding probable errors. As has been previously shown, the older group has a lower case rate than the younger group; and now it is evident that it also experiences a shorter average case duration.

Since respiratory infections are the most important cause of absence from school due to sickness, it will be of interest to consider the average duration of these cases and the medical attention which they received. The average duration of cases of respiratory infections occurring among children in the age group 5-9 was 5.16 ± 0.15 days of school, whereas for cases occurring among children in the age group 10-14, the corresponding constant was 4.09 ± 0.14 . A difference of 1.07 ± 0.20 between these averages indicates definitely that the cases of respiratory infections are of shorter duration among the older children than among the younger children. While among the white children 50.6 per cent of the cases of respiratory infections for which the necessary information was obtained were attended by regular physicians, only 26 per cent of the cases among negro children were so attended.

Table 8 presents information concerning the average duration of cases due to certain important causes, and the per cent attended by a regular physician. Because of the small number of cases of each disease, an analysis by race, age, and sex has not been made.

TABLE 8.—Average duration of and type of attendance for cases of sickness due to certain causes.

Cause.	Average duration days of school lost.	Per cent of cases for which information was obtained attended by a regular physician.
Measles.....	10.50±0.44	73.9
Scarlet fever.....	22.50±1.67	95.2
Chicken pox.....	8.93±.34	66.0
Tonsils (diseases of).....	6.20±.31	63.6
Digestive system (diseases of).....	3.08±.19	2.6

SUMMARY.

The results obtained for the group studied by use of the methods described may be summarized as follows:

1. Negro children had a lower general morbidity rate and lower specific morbidity rates for most causes of sickness than the white children.

2. The average duration of cases of sickness measured by days of school lost was approximately the same for both white and negro children (6.18 ± 0.15 school days for white children and 5.98 ± 0.22 for negro children).

3. The percentage of cases known to be attended by a regular physician was greater among the white than among the negro children.

4. As between boys and girls, there was no significant difference in the average duration of cases of sickness, but girls experienced a slightly higher general morbidity rate than boys.

5. The older group (10–14) experienced not only a much lower general morbidity rate than was true for the younger age group (5–9), but also a significantly shorter average duration per case.

6. Respiratory infections and measles were the two most important causes of absence from school due to sickness.

7. Scarlet fever caused longer absences than any other disease, and was more often attended by a regular physician. In these respects it was followed, in the order named, by measles, chicken pox, diseases of the tonsils, and diseases of the digestive system.

Acknowledgment.—The authors desire to express their appreciation to the Department of Anatomy, Western Reserve University, for the preparation of the graphs appearing in their first paper.

THE SANITARY PROBLEM.

ADDRESS DELIVERED AT THE UNIVERSITY OF CHILE, JULY 28, 1923, BY DR. ALEJANDRO DEL RIO.¹

- I. Introduction.
- II. General Considerations.
- III. Public Hygiene and the Fifth Pan American Conference.
- IV. Necessity for Adopting a Sanitary Policy.
- V. Bases for the Revision of Our Sanitary Organization.
- VI. Conclusions.
- VII. Plea to the President of the Republic.

I. Introduction.

The recent Pan American conference, of which I have had the honor of forming a part as a member of the delegation of Chile, has called me once more to the consideration of the sanitary questions which interested me in times past when I filled the chairs of hygiene and bacteriology of the Medical School and the directorship of the Institute of Hygiene, and later, in 1911, when associated with the Fifth Pan American Sanitary Conference, over which I had the great and unmerited honor of presiding.

This fresh contact with the sanitary problem and with the eminent hygienists of both Americas, and the distressing comparison I have been compelled to make between what we have accomplished and the enormous, stupendous progress made in these last decades throughout the continent, have given me some reflections on the future which we have to contemplate if we do not now halt on the verge of the abyss and face the conditions to which faulty administration and sanitary anarchy are hurrying us. Such reflections now induce me to suggest what seem to my judgment the ways and means of rescuing the country from its unhappy situation.

As a medical hygienist I passed many cruel moments at the fifth conference, both in the committee on hygiene and in my daily intercourse with the distinguished sociologists who were our guests, whenever there was any occasion to refer to our organization and our sanitary status; and I promised myself that I would answer the call of duty and love of country which summoned me to take up my struggle of former years.

Hence, I now appear before you here to break a lance for public hygiene, also called preventive medicine, which has not, up to the present time, received from our public men the consideration that it deserves, save in a few isolated and unrelated efforts which have given no results.

II. General Considerations.

Public hygiene from the point of view of legislation gives a very satisfactory impression if we consider the letter of the law. Our

¹ Translated from *Anales de la Universidad de Chile*, segunda serie, año I, 3er. trimestre de 1923.

sanitary code, save in those parts which relate to the organization of the personnel and the legal sanctions, is, in general terms, good; its regulations as formulated to date produce the impression of being well considered. The laws relating to internal affairs assign to the municipalities a very ample field of action and might have been effective if long, disappointing, and apparently conclusive evidence had not fully demonstrated the complete and absolute breakdown in communal action and the weaknesses of the fundamental laws of urban hygiene.

We have to confess that we have committed the grave error of trusting more than was justified to the efficacy of law, and the still graver error of resting satisfied with fine phrases which meant nothing in view of the defective organization which we possess, the lack of trained personnel devoted solely to its several functions, the total absence of auxiliary personnel, by which I mean sanitary nurses, and finally to the insufficient means provided for the maintenance of the different branches under the municipal appropriations.

Our mortality rate remains in most cases stationary, or shows only slight variations, and is expressed in terms now unknown in the majority of civilized countries; the infantile mortality rate is appalling; preventable endemic diseases are unchecked; epidemics have a free field of action, as in the epochs which we recall with horror; and the social scourges, the fateful triad, alcoholism, tuberculosis, and the venereal diseases, affecting the germ of life, are rapidly carrying off at least one race which in better times was proverbially healthy and strong. Influences of a purely social and economic nature operate also in diminishing the natural defenses against the forces adverse to health.

It is time to meet this evil in all its intensity and to act like brave men—to act as a race should act that intends to exist in full and vigorous health and well-being, free from the daily accidents occasioned by conditions which are in their nature preventable, as becomes a race which aspires to a better future and to an existence passed under good community conditions and in decent dwellings.

Regrets are useless, as are also endeavors to fix responsibilities for past and present conditions. Let us simply confess that we have erred, that we have lacked foresight, that we have missed our way to the desired end, which is "to live in normal sanitary conditions," and let us endeavor to find the right road.

Like the path of virtue, it is difficult and often thorny. It offers no immediate flattering prospects of ease, but it leads to a desired end. It is difficult because sanitary service is not improvised but requires previous training of personnel, both directive and auxiliary, and each scientifically equipped and specialized. It is a thorny path because it requires much pecuniary sacrifice on the part of

State and municipality to remunerate this personnel in a manner adequate for securing an efficient organization. Economy and penuriousness are in this situation counteractive, since they neither remedy existing evils nor prevent epidemic explosions which, in the end, compel great expenditures whether we will or no, made without due consideration at the last moment and under the pressure of circumstances.

The sphere of public hygiene to-day is wider than of old; its modes of action have undergone an evolution; its social aspect has expanded in a manner not hitherto imagined. It aims not only at the reduction or extinction of diseases of a contagious or infectious nature, but seeks to improve conditions and to correct injurious influences; and, as regards the individual, it strives to amend faulty tendencies and to invigorate the system; to provide for work to be carried on under conditions which do not exceed the limits of normal strength; and to give to the worker the satisfaction of full health and enjoyment of life. From being bureaucratic, hygiene has become popular in the widest meaning of the term, bringing to each household the modern messengers of the goddess Hygiene, the sanitary nurses, agents of the new order, who are of inestimable social and technical value.

Until recently the efforts of hygiene work have been directed toward urban conditions. To-day we understand better the importance of the conditions in which the rural population lives, and we endeavor to bring to the rural community the benefits of sanitary activity. Great importance is also attached in these days to eugenics and child welfare, not only during the first two years of life, but throughout the school-age period. Toward this end modern organizations work with special zeal in creating medical and sanitary services having wide scope and trained efficiency and laboring with excellent results in this rich harvest field of sanitary endeavor.

III. Public Hygiene and the Fifth Pan American Conference.

The fundamental principles established by the Fifth Pan American Conference as regards sanitary matters are of great significance for the future of preventive medicine in countries on the American continent. The Chilean delegation had the honor of proposing, among other things, the declaration expressed in such precise terms by Doctor Vincent, first in his principal statement and later in a special declaration in terms agreed upon first by Chile and later by Cuba. The resolutions as they relate to the matter in hand are as follows:

"2. That the efficiency of a public health administration depends directly on the existence of an expert and experienced personnel

which can be secured only by the recognition of the fact that preventive medicine constitutes a special profession for which there should be provided appropriate training, permanence in office, promotion based solely on meritorious service, and a pension system.

“That each country should consider a program which includes the following points:

“(i) Full recognition, by means of special training, permanence in service, adequate remuneration, and social prestige, of the profession of public hygiene as a special field of activity essential to the welfare of the state.

“(ii) Institution of courses of preparation for public health personnel or the education of individuals, selected by the Government, in the universities of other countries.

“(iii) Exchange visits of the representatives of the sanitary organizations with other countries.”

These principles, accepted without alteration by the conference, form the corner stone of the future sanitary organizations of American countries. They are particularly interesting to us on account of their having been formulated by the president of the Rockefeller Institute, the noted American sociologist, Doctor Vincent; and their unanimous adoption by the committee on hygiene and the plenary conference will go far in influencing the opinions and action of our public men.

I shall consider it my duty, in accordance with the purpose of the conference, to address a communication to the rector of the university, soliciting his aid and that of the administrative council in favor of carrying out two plans suggested by the resolutions of the conference which have already been cited. The first is to send abroad as many as six Chilean physicians, selected by the faculty of medicine, who shall for two years devote themselves exclusively to the scientific and practical study of sanitary science and methods. These physicians, having previously formally renounced professional practice of medicine, shall, from the start, be under contract to serve, on their return, as sanitary physicians, particularly in the field of preventive medicine, under the immediate direction and authority of the director of health. It shall be stipulated that, in addition to the pension which they receive during their special studies abroad, they shall receive on their return an initial salary of 20,000 pesos, which shall be increased by 5,000 pesos every five years until a maximum of 40,000 pesos is reached. Every form of private professional practice shall be prohibited. In order not to burden the national budget too heavily, it is proposed that the authority conferred on the President of the Republic shall cover a period of six years in order that not more than two appointees be sent abroad at the same time.

The favorable reception which this proposition has received from the authorities of the university and from the press of the capital, and later from the Government, is a happy augury of success; and so the noble purpose of creating a sanitary organization ought to be decisively demonstrated as being worth while.

The second project submitted to the university relates to the creation of a school of hygiene designed to instruct the remainder of the personnel required by the public health service in the discharge of the duties entrusted to them. This school might, in turn, serve to perfect and specialize the sanitary nurses who fill such an important rôle in modern health organizations. The realization of this plan will not involve great national expenditure. The school of hygiene will also be of use in giving special sanitary training to hospital physicians and surgeons who desire to attain the grade of section chief in those establishments in order to cooperate effectively with the technical boards. It will also be of use to the medical personnel serving in child-welfare institutions as officers or in a private capacity.

Activated by this line of thought, the board of charities at Santiago has petitioned the Government for funds to create in the hospitals under its direction new training schools for nurses. At present they have such schools only at the Manuel Arriaran and San Vicente de Paul hospitals. If, as is to be hoped, the desired funds are appropriated, Santiago will, in another year, have five schools for the proper training of nurses, which will mean not only an immediate and substantial gain for the hospitals themselves and for the general public, but also for the sanitary service, which will thus have at its disposal a trained personnel available for its own needs.

It has also been proposed to reorganize the present State school of nurses and to devote it exclusively to the training of sanitary nurses. In any event, whether by this means or the plan previously referred to, the idea of contracting for a sanitary nurse to found this new career among us, which has met with favor from the rector of the university and which figures in the estimates for the coming year, deserves an enthusiastic reception. Let us hope that this request may be received as it deserves by the Government and the Congress.

In view of the extraordinary results obtained since the great war, in European countries and in America, by means of the institution of sanitary nurses, I venture to express the belief that the expenditure to this end will be considered to be in the category of the unavoidable. In truth, the course of progress may not be arrested with impunity.

In spite of some natural skepticism I remain deeply persuaded, ladies and gentlemen, that we are now going to succeed; and I cherish strong hope that our wishes will soon be realized, since on

their success rests the future of our country. I feel sure that patriotism will prove to be no empty word in the ears of our representatives, however impervious their hearing may have been made to appear from their wearisome daily differences and political conflicts, to which they have devoted themselves with rare tenacity, and by their complete misunderstanding of national feeling.

IV. Necessity for Adopting a Sanitary Policy.

In the matter of sanitation, as in many other things, we have shown ourselves lacking in certain particulars which are the rule and not the exception in Anglo-Saxon countries, such as practical sense and the spirit of perseverance in efforts tending toward a useful end. Hence, notwithstanding our accomplished work in this direction, particularly as regards pure water and sewage, the results viewed as a whole lack unity, and, above all, efficacy. We enact good laws but neglect to enforce them; we create functions which require a numerous and technical personnel and do nothing to supply that personnel; and when, as sometimes happens, we create a special branch, it is found impossible to keep it in operation, owing to the insufficient financial support provided for it by law.

Among the unfavorable causes which have operated to bring about our incompetency in public hygiene, we should mention that parliamentary omniscience which deforms the best considered laws and devitalizes cooperation, reducing to zero the influence of technical experts. Laws, such as sanitary laws, prepared by competent persons, should be approved or rejected, but not amended out of existence. Happily for us, there exist in this country some persons eminently fitted to cooperate in this work and exceptionally free from the taint of political corruption.

Another factor in our failure to progress is the permanent insufficiency of the resources assigned to our work, aggravated by the usual delay in the passage of the annual appropriation act, with the inevitable consequence of a disorganized service and demoralized personnel.

Everything points to and counsels resolute handling of this problem and the precise definition of the sanitary policy of the future, with revision of the present legislation and the existing service with a view to securing for both the necessary scope and requisite efficiency.

We need, therefore, a plan or a sanitary policy which will lead us in due time to a better state of things—to a condition which the country needs and demands for its proper development, and which shall free us from those evils which retard our progress and from the reproach of not having appreciated, and endeavored to attain to, the position in these respects which is enjoyed by happier countries in this hemisphere and on this continent.

This policy is certainly capable of realization and is not beyond our financial capacity. The following points should be considered:

(1) Reforms to be introduced into the present sanitary legislation to render it adequate to meet the existing national needs judged by the accepted modern viewpoint.

(2) Proper means of creating a specialized technical personnel capable of successfully carrying out sanitary measures.

(3) The training of visiting sanitary nurses or the creation of an auxiliary personnel, which is indispensable to any modern organization of this nature.

(4) The fundamental necessity for providing the sanitary service with funds sufficient adequately to remunerate the personnel and enable them to devote themselves exclusively to their official duties, thus securing from the various sections and from the laboratories adequate services.

In view of their extreme importance we will consider each of these questions separately.

The first, which relates to the revision and modernization of the sanitary laws, is of great significance and will serve as the theme of the following section.

With respect to the second and the third, creation of sanitary personnel, directive and auxiliary, we will refer to the resolutions of the Fifth Pan American Conference and to what I have already said in regard to sanitary nurses in preceding sections of this paper.

We come now to the capital question, the financial one. The State and municipality should seriously consider the vital necessity of improving the sanitary conditions of the country on the one hand, and on the other, the ways and means of securing this result and complying honorably with what Disraeli defines as "the first duty of a statesman" in referring to the care of the public health. The problem does not admit of an equivocal solution. The deals and fictions to which assemblies—Congressional or municipal—so often have recourse to satisfy in form but not in fact the rightful aspirations of the country in such vital matters, serve only to cause discouragement in the public mind, and distrust of the methods, badly applied, and of the men who are compelled to serve as the working medium for such ineffective action. Our country has a vital need; we have the right not only to live, but to live in health. The country requires a proper sanitary service and should make the necessary sacrifices to secure the proper results, which have been vainly striven for, yet never attained, in spite of good suggestions and of laws passed to this end.

How much shall we expend for public hygiene? How much should we expend for really efficient sanitary service?

According to information furnished me by my valued friend, Mr. Alvaro Covarrubias Arlegui, chief of the central bureau of statistics,

the estimated amount assigned to public hygiene for the year 1922 was 1,224,000 pesos. To this should be added the amounts allotted by the sanitary laws on emergencies to combat epidemic diseases, with a possible total of not to exceed 1,500,000 pesos, a considerable part of which is given under these laws to the aid of the board of charities to cover the expense of unusual hospitalization.

It is difficult to estimate the amount of the municipal expenditures for this work; but a study of the several estimates gives a total expenditure of 2,012,435 pesos for hygiene and charity, the sum of 412,260 pesos for charity, and approximately 1,600,000 pesos for hygiene. These figures do not accurately represent the facts, since it is well known that, in certain cases, the total amount of the municipal estimates complies only in form with the legal requirement of apportioning 10 per cent of the appropriations to hygiene and that the amounts legally assigned to this end are very variously diverted. How much is actually expended? It would be venturesome to make a precise estimate in this respect, but I do not think I exaggerate in reducing this figure to only 500,000 pesos.

We see, therefore, that the country will expend annually in public hygiene, summing up the items which are represented in the estimates of the municipality and the treasury, approximately 2,000,000 pesos. To appreciate the significance of these figures we will make a brief statement of the amounts required for sanitary and public-health work in other countries. In England, the cradle of hygiene, State and municipalities expend annually more than 1,000,000,000 francs. The sanitary personnel numbers 25,062, as is shown in the following statement:

- 1,600 medical inspectors, of whom 285 devote themselves exclusively to their official duties;
- 238 physicians for the prevention of tuberculosis;
- 1,300 medical school inspectors;
- 1,300 medical inspectors of working conditions;
- 324 medical inspectors of the insane and retarded;
- 4,800 medical inspectors of the poor;
- 12,000 medical inspectors for social insurance;
- 2,000 sanitary inspectors and social workers, male and female; and 1,500 advisers in hygiene and sanitation.

In the United States of North America, it is estimated that a properly conducted health service requires approximately an annual expenditure of \$1 for each inhabitant. The city of New York expends about \$3.50 per inhabitant yearly, or approximately \$20,000,000.

In Brazil the annual estimate for health purposes equals 30,000,000 milreis. (The Brazilian milreis has about the same value as the Chilean peso.)

These statements afford a basis for comparative estimates.

Let us take as a basis the American standard—\$1 per person per year for public-health work. It would not be excessive, it appears to me, for us to fix the fiscal quota at half this amount, Estimating the average value of the dollar as 5 pesos in the money of Chile, and the population as 4,000,000, we have, $2.50 \times 4,000,000 = 10,000,000$ pesos. It is to be noted that in assigning to the health service the sum of 10,000,000 pesos, the proportion thus assigned would scarcely exceed 2.5 per cent of the total estimate.

As regards the communal estimate, I consider that its quota should not be less than half that of the state, or 5,000,000 pesos.

To sum up: We spend 2,000,000 pesos; we should spend 15,000,000.

The margin of 13,000,000 pesos allows us to consider the possibility of giving to hygiene the position which belongs to it in any group of people who have become convinced of the value of health and life and who do not wish to endure mortifying and belittling comparisons.

This array of millions and the bold statement that in order to live like decent human beings we would be required to expend not less than 2.5 per cent of the fiscal appropriations, together with a municipal expenditure equal to half the former amount, or, I repeat, 15,000,000 pesos in all, might cause me to appear as one insane—a dweller in the moon, or, to my medical friends, bordering on general paresis. I find myself, therefore, obliged to give an explanation which devolves on me as a Chilean citizen and permit myself to interpret my aspirations for national greatness without the suspicion of having fallen into a pathologic delirium.

I believe that our sanitary service is now in its infancy, and that as it develops we will have to make greater provision for its maintenance. I consider that its growth can not be very rapid, given the difficulties presented by its reorganization and the time that will be required for the preparation of its personnel, particularly for the departments which are to be created.

In any event, we should prepare our minds to accept cheerfully the pecuniary sacrifices which reform will bring with it, having in view the figures and the examples which I have cited and the calculation of the cost of good sanitation. There is no need, however, of alarming our financiers in the slightest degree at present. Perhaps by 10 years more, having progressed sufficiently, we shall have seen the necessity of reaching the goal now presented. But the money which will have been expended for this purpose will undoubtedly be proved to be such a good investment that cavilers will be silent, even those most hardened objectors, whose negative minds invariably react against those great problems that to be understood need to be studied.

No doubt we shall hear strange statements with regard to sanitation from politicians. I still remember with amazement some astounding opinions on technical sanitary matters which, during my experience at the Institute of Hygiene, I had to listen to from the ministers of state in the department of the interior. And if it were not for the high respect which these distinguished servants of the country deserve in other branches of the public service, I might here draw a humorous picture for the amusement of my kind hearers. I still believe, however, that progress and the diffusion of knowledge will remove the impressions of the past, and that the hygienization of the country will in future find a more favorable field for its development and completion.

V. Bases for the Revision of Our Sanitary Organization.

The sanitary organization which we are about to sketch broadly and generally is really only an amplification of that now existing, but with better and more logical form than we now possess, and with the addition of new departments to meet the demands which have only in very recent years met with general acceptance.

When the time comes to revise the present sanitary code as it relates to the organization of the several services functioning under it, the way will have been opened to provide for the creation of new departments or sections as required without the enactment of new laws at every turn. In this way, the interpretation of the laws permitting, we will be enabled to keep step with the advance of sanitary science and adapt its dictates to our national needs.

The "bases" presuppose an amplification of the functions of the state at the expense of those which the laws of internal government assign to the municipality. As far as we are concerned, long and uninterrupted experience has taught us what we have to expect of "municipal hygiene," given the usual characteristics of the communal administration as it is found in this country, except for some infrequent and honorable exceptions. The municipalities having lost the habit of exercising their political rights as those rights are to-day understood, while persisting in the disconcerting activities which characterize their normal administration, and lacking the excellence which the "qualification of age" should bring, it is necessary for the state to take under its care, at least in Santiago, such sanitary services as those of water supply, sewer construction, paving, public relief, etc.

In the case of the properly functioning municipalities and in regions under State control the convenience of giving the State a preponderating share in sanitary matters which are not strictly local has been recognized. Thus in the United States, when a situation of this sort, as, for example, the unusual development of an endemic disease

or an epidemic outbreak, is not properly met by the State concerned and a public menace is thus created, the Federal Government intervenes. In the same manner a manufacturing food plant whose products are consumed throughout the country and abroad comes within the sphere of Federal action. It would be easy to multiply examples.

The national health service should be in the department of hygiene, which has been found to offer many advantages in England, France, Poland, Czechoslovakia, Serbia, Austria, Canada, and many other countries. Under the department of state there might be established a service of social welfare and labor and public aid or charity.

This suggestion is based on the hope that "ministerial accession" will be supplanted by a definite system which will allow the affairs of the country to be duly administered. The three sections of the proposed department will be under the respective "director generals," no intermediaries coming between them and the minister, except nontechnical employees concerned simply with the transaction of business.

The general health bureau will consist of a secretary, to whom shall be assigned a trained counselor, and eight departments, viz:

1. Infant hygiene.
2. Social hygiene.
3. Prophylaxis.
4. Urban hygiene.
5. Rural hygiene.
6. Regulation of food products and beverages.
7. Regulation of the practice of certain professions (medicine, dentistry, pharmacy) and of commercial handling of drugs.
8. Sanitary engineering.

The following statements present the leading features of the organization:

DEPARTMENT OF HEALTH.

WELFARE AND LABOR, PUBLIC HEALTH, AND CHARITIES.

SECTION OF PUBLIC HEALTH.

Director General of Health and Trained Counselor.

Department No. 1. Infant Hygiene:

Section 1. Infant welfare—

Antenatal care;

Encouragement of maternity hospitals and attendance for home confinements;

Training of special nurses for child welfare (specialization in this branch);

Inspection of works and institutions for protection of infancy.

Department No. 1. Infant Hygiene—Continued.

Section 2. Medical school inspection—

- Proper organization of medical school service throughout the country;
- Inspection of this service;
- Special training of sanitary nurses to this end;
- Encouragement of school lunches as a regular institution;
- Encouragement of open-air schools and vacation camps; and, in general, all that tends to protect the child during school age.

Department No. 2. Social Hygiene:

Section 1. Demography—

- The periodical publication of demographic statistics and direct special inquiries which may be deemed necessary.

Section 2. Eugenics—

- A study of all problems concerning the degeneration of the race;
- Proposal for the adoption of measures judged adequate to ameliorate and invigorate the race;
- Proposal of limitations tending to prevent incorporation of immigrants who may be undesirable from the sanitary and eugenic point of view;
- Encouragement of open-air amusements;
- The combating of alcoholism and other causes of degeneration of a toxic character.

Section 3. Propaganda and instruction—

- Diffusion of knowledge of hygiene;
- Education by notices, leaflets, moving pictures;
- Publication of short letters;
- Formation of specialized sanitary personnel (physicians and sanitary nurses);

A high school for hygiene.

Section 4. Hygiene of labor—

- Studies relative to the relations between health and labor;
- Work of women and children;
- Sicknesses and professional accidents;
- Workmen's insurance.

Department No. 3. Prophylaxis:

Section 1. Prophylaxis on land—

- General prophylaxis;
- Special prophylaxis;
 - Venereal diseases;
 - Smallpox;
 - Exanthematic typhus.

Animal prophylaxis—Diseases transmissible to man.

Section 2. Maritime prophylaxis—

- Sanitary service at ports;
- Sanitary stations;
- Inspection of immigrants, etc.

Section 3. Isolation and disinfection—

- Measures to secure proper isolation in charitable institutions for infectious, acute, or chronic patients;
- To have at command the disinfection service of the city;
- To inspect disinfecting plants, departmental and public, and the disinfecting installations at sanitary stations, port sanitary service, etc.

Section 4. Laboratories—

- Laboratories required for the preparation of serums, vaccines, and biologic and opotherapeutic products;
- Investigation laboratories (experimental);
- Laboratory to facilitate the diagnosis of infectious diseases.

Department No. 4. Urban Hygiene:

Section 1. Urbanization—

Plans and studies in the improvement of city construction;
Plazas and gardens; city and suburban parks, etc.

Section 2. Hygiene of the home—

Sanitary approval of plans for new constructions;
Sanitary control of dwellings, particularly those intended for renting,
etc.

Section 3. Sanitary inspection of public establishments, comprising—

Visits to schools, hospitals, quarters, factories, workshops, etc.

Department No. 5. Rural Hygiene:

Section 1—

Popular educational courses throughout the country.

Training of sanitary nurses for rural hygiene work.

Section 2.—Rural sanitary work by means of outfits prepared by physicians and nurses.

Department No. 6. Legalization of Food Products and Beverages:

Section 1.—Sanitary inspection of food products and beverages at the capital.

Section 2.—

Inspection of municipal hygienic laboratories;

Sanitary inspection of factories producing food products, etc.

Section 3.—Central laboratory for bromatology.

Department No. 7. Regulation of Professions and Commerce in Drugs:

Section 1. Regulation of professions—

Regulation of the medical profession;

Regulation of dentists, midwives, and nurses;

Regulation of pharmacists.

Section 2. Inspection of pharmacies and the manufactories of pharmaceutical products; control of specifics.

Section 3. Laboratory of analytical chemistry.

Department No. 8. Sanitary Engineering:

Section 1.—Potable water, drains, mineral waters.

Section 2.—Public baths, disposal of refuse.

Section 3.—Constructions in general; their regulation and inspection.

I desire here to confine myself to simple announcements of headings, since development of the subjects would involve wearisome details of secondary importance at this time. When these formative ideas meet with favorable reception it will then be time to express them in competent legal form, a more or less laborious undertaking, which will require some time and the collaboration of experts.

VI. Conclusions.

In the course of this address I have endeavored to be brief and concise, even at the risk of not being sufficiently clear in the development of the ideas enunciated. I desire, therefore, to state the conclusions which sum up my convictions. They are as follows:

1. The state of public hygiene in this country is lamentable.
2. We have good sanitary laws, but only a rudimentary organization.

3. Generally speaking, municipal cooperation with national sanitation is rare and of doubtful results.

4. The quota which the estimates of the state and municipalities assign to public hygiene are insufficient to maintain effective sanitary services. The country expends for this purpose 2,000,000 pesos annually; it should expend not less than 15,000,000 pesos.

5. It is of vital importance to react energetically against this state of things and to approach boldly the great national question of elevating, cost what it may, our sanitary status—the basis of our future prosperity, social and economic.

6. The formation in systematic form, and on the basis fixed by the Fifth Pan American Conference, of a sanitary personnel. First in this line should come the approval of the proposed law recently sent to Congress for the establishment in foreign countries of a group of medical hygienists, followed shortly by the creation of an advanced school of hygiene.

7. It is equally necessary to modernize our present sanitary organization by improving the existing services and creating new services judged essential for attaining the end desired.

8. To designate a technical commission to prepare and submit to the consideration of Congress a proposed law giving the sanitary service the efficiency which the country demands.

To conclude, I desire to make one statement. The criticism which I have expressed with absolute frankness and without the literary elegancies which would dissemble the sanitary needs of the state and the present efficiency of the organization, both central and municipal, may give rise to interpretations which I would forestall. I have deliberately omitted any expression which might be considered personal, because I am happy to acknowledge that the officials in charge of the present activities are deserving of all consideration for their knowledge and devotion. If their activity does not meet the sanitary necessities of the country, the fault lies with the defective organization which they direct, the lack of technical assistance, with the meager and, in some cases, ridiculous remuneration which they receive, and, finally, with the limited means placed at their disposal and the uncertainties which result from the frequent defaults in the state appropriation.

I owe it to the managers and editors of the great dailies of the capital to say a few words of thanks and appreciation for their support and their prompt approval of the stand taken against the sanitary pauperism in which we live, and for their active and effective cooperation in the patriotic work of giving the country a proper sanitary service.

VII. Plea to the President of the Republic.

I beg Your Excellency to excuse me, if, deviating from my theme for a moment, I address myself directly to you who have been pleased to honor this occasion with your presence.

Your Excellency, Chile figures like a great black stain on the sanitary map of South America. Our sister nations of the Atlantic have been happier than we, and have had, in due time, statesmen who forged weapons with which to overcome the causes of disease of natural or merely human origin. Montevideo expresses her civilization by showing a general mortality rate not in excess of 12 per 1,000. Buenos Aires offers a rate which does not exceed 16 per 1,000. Rio, a city which in the past was unvisited by tourists on account of a well-founded fear of yellow fever, not only finds itself definitely freed from that plague, but has seen its general mortality rate decline to less than 19 per 1,000.

On the other hand, in our own capital, statistics show a mortality rate which in the five-year period 1918-1922 reached an average of 33.4 per 1,000, with a record of 39.2 per 1,000 in the years 1919 and 1921.

This situation can not be prolonged without grave detriment to our prestige. The problem is exceptionally grave. If death continues to reap in this country, which deserves a better fate, the abundant harvest which our neglect or indifference permits, the native biological increase, which is the only factor for the increase of our population, will be slow and we will fall behind our kindred countries, which are more farsighted and which grow, prosper, and flourish. Dr. Rodriguez Barros, in his inaugural address to the faculty of medicine, recently called attention to a new unfavorable feature; that is, our high natality, which formerly filled up the ranks depleted by death, is on a constant decrease.

I entreat Your Excellency to take an energetic part in the great work of making the country sanitary and ameliorating the conditions of life, thus carrying on, regardless of antiquated objections and pettinesses, the reforms demanded by the existing sanitary organizations and creating new organizations as public needs require.

I have confidence, Your Excellency, that, in your administration and under your auspices and by your activity, those great reforms will be carried out which will give us, I assure you on my conscience and with all my faith, a new Chile, with a sane mind in a healthy body, respected for her population, for her energy in all spheres of activity, for her economic and social prosperity, and for the greatness of her institutions, among which shall figure, in the place of honor, those which patriotism dictates to our legislators in regard to the public health.

HAY-FEVER PLANTS OF THE KANSAS CITY DISTRICT.

A knowledge of the plants which are the specific causes of hay fever is fundamentally essential to health officers and the medical profession in the prevention and treatment of that disease. It is necessary in order that pollen extracts of the species can be made for skin-reaction tests and for the desensitization of the patient by use of the extract or extracts found to give a positive reaction; and also in order that the noxious weeds and grasses may be identified and eradicated, where possible, or avoided by persons susceptible to their toxic action. As the flora varies with different sections of the country, with the altitude, climate, seasons, rainfall, and other conditions, special studies must be made from the standpoint of floral geography in order to ascertain which plants of each particular section play the important rôles in the causation of hay fever, asthma, and plant dermatoses.

A report of an eight-year botanical and clinical study made in Kansas City and the surrounding territory by Dr. W. W. Duke and Mr. O. C. Durham was recently published in the *Journal of the American Medical Association*.¹

In the botanical studies, notes were made each year relative to the abundance in growth of the different plants, the relative quantity of pollen produced by each, the nature of the pollen, dates of pollination each season, and dates of greatest abundance of production. In the clinical studies an effort was made, by means of histories, together with scratch, intracutaneous, ophthalmic, nasal, and therapeutic tests, to determine the rôle played by each plant.

The quantity of pollen in the air was found to vary not only with the wind but with other weather conditions. On cloudy days the pollen practically ceased to be carried into the observation greenhouses, and cloudy weeks were associated with periods of marked relief for hay-fever patients.

Pollination was found to antedate clinical hay fever by two weeks or more.

A comparison of the botanical observations with the results of specific testing showed that plants producing the greatest quantity of pollen over the longest season were the most important factors in the causation of illness. The "tree season" is relatively short and the number of trees small compared with the grasses and weeds, so that the quantity of pollen set free from the trees each year is not so great as that from the weeds and grasses; and it was found, as a result of skin testing, that persons sensitive to tree pollen were relatively rare.

¹ A botanic survey of Kansas City, Mo., and neighboring rural districts—with reference to the flora responsible for hay fever, asthma, and dermatoses. By W. W. Duke, M. D., and O. C. Durham. *Journal American Medical Association*, March 22, 1924. pp. 939-944.

The "grass season" is longer than the "tree season" and the growth of the grasses, though more profuse than that of the trees, is less profuse than that of the weeds; therefore, the quantity of grass pollen set free each year is greater than that released by the trees but less than that released by the weeds. It was also found that "grass cases" were much more numerous than "tree cases," but less numerous than "weed cases."

The fall weeds were the greatest pollinators. They are general in distribution and profuse in growth, and produce light pollen in quantity over a long season. In harmony with this fact, the investigators found, by specific tests, that fall weeds were by far the most common sources of illness in the district studied. Of the weeds, the two ragweeds found to be the greatest producers of pollen were also the most common sources of illness.

The majority of the skin tests were made by injecting intracutaneously 0.01 c. c. of a solution containing 0.01 mg. of pollen to a cubic centimeter.

Most of the patients showed skin sensitiveness to a large number of pollens, often to each member of a certain group of pollens. As a general rule, the pollen that gave the strongest skin test was the one that gave a positive conjunctival test when sprayed into the eye in a dilution of 1:1000. The pollens which gave less intensive skin tests usually gave negative conjunctival tests. The pollens that gave positive conjunctival tests, therefore, were the ones considered responsible for the symptoms, and were chosen for therapeutic use. Usually, therapy with these pollens (from one to four in number) gave complete clinical relief.

The authors make note, however, that the above statements were subject to marked exceptions. Several instances were observed in which the patient was actually made ill by exposure to pollen of air which did not include the one pollen to which he reacted most markedly when tested by skin and conjunctival tests.

As regards specificity, patients sensitive to ragweed in one locality were often found to be unaffected by ragweed pollen in other districts.¹ It was also noted that pollen which caused the patient to have hay fever was not necessarily the pollen to which he was the most sensitive, but the one which he received in greatest dosage. In other words, the authors state, symptoms seem to be the result of a mean between degree of sensitiveness and dose of pollen encountered. It is noted that of the patients who were clinically sensitive to pollen, 45 per cent reacted positively to some other substance—vegetable, grain, sea food, or animal dandruff. Some patients who were sensitive to pollen also reacted to some other part of a plant, either of the same or of a different family.

¹This has been questioned by good authorities.—Ed.

In summary the authors state:

“It is interesting to note how closely the botanic data harmonize with the results obtained by specific testing. Of the pollen-sensitive patients, by far the greatest number were sensitive to the light pollens set free in the air in the greatest abundance over the longest period of time; first and foremost, to short ragweed; secondly, to giant ragweed, and less often to cocklebur, marsh elder, lamb’s quarters, wormwood, and *Acnida*. The latter weeds showed relatively large percentages so far as skin tests were concerned; but not nearly so great a proportion as this gave positive conjunctival tests, and we believed that patients were not so often made ill by these pollens in the amounts encountered naturally as the skin tests would indicate. The spring grasses, with their shorter season and smaller ratio of pollen production, did not compare in number of sensitive cases with fall weeds. Finally, the trees with their relatively short season and comparative scarcity were responsible for very few cases. In fact, we did not observe a sufficient number of tree cases to permit the drawing up of substantial statistics. So few patients were found sensitive to flowering plants and cultivated grains that these cases were put down as curiosities. It seemed quite clear that the principal offenders, both in number of cases and in the duration and severity of illness produced, were the weeds which produce the greatest quantity of pollen over the longest period of time.”

The more common plants in Kansas City district producing dry, light pollen in relative abundance.

Popular name.	Dates of pollination—Number of weeks in—								Per centage of positive tests.
	March.	April.	May.	June.	July.	August.	Sep- tember.	Octo- ber.	
Hazelnut	++								0
Cottonwood		++							0
Birch		++							0
Box elder		++							0
Ironwood		++							1
Oak		++	++						1
Sycamore		++	++						0
Ash		++	++						0
Hickory		++	++						1
Black walnut		++	++	+					0
Red sorrel		++	++	++					0
Rye			++	++					10
Dock			++	++	++				
Blue grass			++	++	++				6
Orchard grass			++	++	++				6
Lamb's quarters			++	++	++	++	++	++	15
Timothy			++	++	++	++	++	++	15
Buckhorn			+	++	++				2
Slough grass			++	++	++				14
Spiny amaranth						++	++	++	
Water hemp						++	++	++	3
Hemp						++	++	++	10
Giant ragweed						++	++	++	42
Pigweed						++	++	++	30
Slender pigweed						++	++	++	3
Hop						++	++	++	
Cocklebur						++	++	++	40
Short ragweed						++	++	++	70
Roadweed						++	++	++	40
Western ragweed						++	++	++	
Tall redtop grass						++	++	++	
Marsh elder						++	++	++	21
Burweed marsh elder						++	++	++	
Marsh marigold						++	++	++	15
Wormwood						++	++	++	15

The more important plants and the weeks during which pollination is most profuse are indicated by heavy-faced type. (The representation of the weeks by the above method, while not rigorously accurate from the standpoint of the calendar, is obviously quite sufficiently so for the purpose in hand.—Ed.)

DEATHS DURING WEEK ENDED MAY 24, 1924.

Summary of information received by telegraph from industrial insurance companies for week ended May 24, 1924, and corresponding week of 1923. (From the Weekly Health Index, May 27, 1924, issued by the Bureau of the Census, Department of Commerce.)

Policies in force.....	Week ended May 24, 1924.	Corresponding week, 1923.
Number of death claims.....	56, 109, 722	52, 189, 682
Death claims per 1,000 policies in force, annual rate.....	11, 057	10, 026
	10. 3	10. 0

Deaths from all causes in certain large cities of the United States during the week ended May 24, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923. (From the Weekly Health Index, May 27, 1924, issued by the Bureau of the Census, Department of Commerce.)

City.	Week ended May 24, 1924.		Annual death rate per 1,000, corresponding week, 1923.	Deaths under 1 year.		Infant mortality rate, week ended May 24, 1924. ¹
	Total deaths.	Death rate. ¹		Week ended May 24, 1924.	Corresponding week, 1923.	
Total (64 cities).....	6, 441	12. 5	12. 1	847	693	.....
Akron.....	28			1	8	11
Albany ⁴	40	17. 6	14. 2	2	6	44
Atlanta.....	63	15. 6	11. 7	6	3	
Baltimore ⁴	213	14. 1	14. 0	27	34	78
Birmingham.....	67	17. 4	15. 2	8	5	
Boston.....	203	13. 6	13. 1	21	27	58
Bridgeport.....	32			4	3	63
Buffalo.....	127	12. 1		15		64
Cambridge.....	27	12. 6	15. 9	3	6	52
Camden.....	30	12. 4	11. 8	2	2	32
Chicago ⁴	706	12. 5	11. 8	136	85	126
Cincinnati.....	121	15. 5	15. 4	13	11	32
Cleveland.....	186	10. 6	10. 2	31	24	81
Columbus.....	57	11. 1	12. 2	7	5	67
Dallas.....	44	12. 2	12. 0	6	8	
Dayton.....	31	9. 6	9. 5	1	5	17
Denver.....	72			10	13	
Des Moines.....	29	10. 4	12. 2	1	1	
Detroit.....	282			48	55	89
Duluth.....	29	14. 0	10. 3	5	1	107
Erie.....	18			4	4	82
Fall River ⁴	31	13. 4	12. 9	5	3	70
Flint.....	10			2	3	35
Fort Worth.....	15	5. 3	6. 2	2	1	
Grand Rapids.....	16	5. 6	11. 8	1	5	16
Houston.....	39			5	4	
Indianapolis.....	77	11. 5	13. 4	11	4	83
Jacksonville, Fla.....	33	16. 8	12. 5	7	4	
Jersey City.....	79	13. 2	13. 0	10	9	72
Kansas City, Kans.....	26	11. 5	11. 3	1	3	20
Kansas City, Mo.....	97	14. 1	15. 6	12	10	
Los Angeles.....	227			32	26	100
Louisville.....	99	20. 0	16. 4	7	8	67
Lowell.....	30	13. 5	12. 7	8	2	143
Lynn.....	11	5. 5	13. 7	1	2	25
Memphis.....	46	13. 9	17. 8	3	6	
Milwaukee.....	98	10. 4	11. 9	22	13	101
Minneapolis.....	98	12. 2	12. 6	12	9	64
Nashville ⁴	46	19. 4	13. 6	5	4	
New Bedford.....	26	10. 2	17. 6	4	8	62
New Haven.....	27	8. 0	10. 2	4	4	52
New Orleans.....	143	18. 8	17. 3	19	15	
New York.....	1, 393	12. 1	10. 8	173	148	70
Bronx Borough.....	164	9. 8	8. 0	16	15	56
Brooklyn Borough.....	470	11. 2	10. 0	57	44	61
Manhattan Borough.....	617	14. 2	12. 9	79	72	77
Queens Borough.....	113	11. 1	9. 2	20	14	109
Richmond Borough.....	29	11. 6	13. 1	1	3	18

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1923. Cities left blank are not in the registration area for births.

³ Data for 61 cities.

⁴ Deaths for week ended Friday, May 23, 1924

Deaths from all causes in certain large cities of the United States during the week ended May 24, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923. (From the Weekly Health Index, May 27, 1924, issued by the Bureau of the Census, Department of Commerce)—Continued.

City.	Week ended May 24, 1924		Annual death rate per 1,000, corresponding week, 1923.	Deaths under 1 year.		Infant mortality rate, week ended May 24, 1924.
	Total deaths.	Death rate.		Week ended May 24, 1924.	Corresponding week, 1923.	
Newark, N. J.	92	10.8	10.9	13	13	61
Norfolk	38	12.1	9.2	8	1	145
Oakland	48	10.1	11.1	4	3	50
Oklahoma City	22	11.0	---	9	---	---
Omaha	50	12.5	11.2	6	5	64
Paterson	21	7.8	12.3	2	3	33
Philadelphia	450	12.0	12.7	47	50	60
Pittsburgh	154	12.8	9.3	28	17	95
Portland, Oreg.	71	13.3	8.0	8	4	83
Providence	51	10.9	14.2	8	7	65
Richmond	57	16.2	14.1	9	4	106
Rochester	73	11.7	---	4	---	31
St. Louis	200	12.8	15.0	22	18	---
St. Paul	50	10.7	13.4	4	4	34
Salt Lake City	30	12.2	13.2	3	6	50
San Antonio	65	17.7	16.7	17	16	---
San Francisco	115	10.9	13.7	8	13	48
Schenectady	22	11.4	11.1	3	2	85
Seattle	75	---	---	8	5	77
Somerville	25	13.0	8.4	2	4	54
Spokane	20	---	---	2	2	42
Springfield, Mass.	26	9.1	10.5	1	2	17
Syracuse	47	13.0	13.6	6	5	74
Tacoma	21	10.6	12.8	3	0	69
Toledo	69	13.0	10.8	10	7	95
Trenton	35	14.1	11.1	8	2	131
Utica	25	12.4	8.6	3	1	65
Washington, D. C.	121	13.0	12.5	11	9	63
Waterbury	15	---	---	2	1	45
Wilmington, Del.	23	10.0	13.7	2	9	43
Yonkers	23	10.9	9.2	3	2	66
Youngstown	38	12.8	9.7	4	5	58

⁴ Deaths for week ended Friday, May 23, 1924.

Reports for Week Ended May 31, 1924—Continued.

CONNECTICUT—continued.		INDIANA.	
	Cases.		Cases.
Scarlet fever.....	107	Chicken pox.....	23
Tuberculosis (all forms).....	39	Diphtheria.....	32
Typhoid fever.....	1	Influenza:	
Whooping cough.....	21	Grant County.....	19
		Scattering.....	13
DELAWARE.		Measles.....	215
Chicken pox.....	1	Mumps—Marion County.....	65
Influenza.....	1	Pellagra—Crawford County.....	1
Malaria—Laurel.....	9	Pneumonia.....	7
Measles.....	12	Scarlet fever:	
Mumps.....	5	Lake County.....	14
Pneumonia.....	8	Scattering.....	38
Scarlet fever.....	9	Smallpox:	
Tuberculosis.....	1	Jay County.....	14
Whooping cough.....	3	Marion County.....	38
		Scattering.....	54
FLORIDA.		Tuberculosis.....	24
Diphtheria.....	7	Typhoid fever.....	9
Leprosy.....	1	Whooping cough.....	73
Malaria.....	12		
Typhoid fever.....	12	IOWA.	
		Diphtheria.....	19
GEORGIA.		Scarlet fever.....	40
Chicken pox.....	16	Smallpox.....	28
Diphtheria.....	7		
Dysentery (amebic).....	1	KANSAS.	
Dysentery (bacillary).....	17	Chicken pox.....	45
Hookworm disease.....	19	Diphtheria.....	17
Influenza.....	1	German measles.....	4
Malaria.....	16	Influenza.....	6
Measles.....	2	Lethargic encephalitis.....	1
Mumps.....	21	Measles.....	340
Pneumonia.....	14	Mumps.....	105
Scarlet fever.....	8	Pneumonia.....	33
Septic sore throat.....	1	Scarlet fever.....	40
Smallpox.....	28	Smallpox.....	35
Tuberculosis (pulmonary).....	22	Tetanus.....	1
Typhoid fever.....	4	Tuberculosis.....	51
Whooping cough.....	17	Typhoid fever.....	5
		Whooping cough.....	42
ILLINOIS.			
Cerebrospinal meningitis:		LOUISIANA.	
Chicago.....	1	(Exclusive of New Orleans.)	
La Salle County.....	1	Diphtheria.....	5
Diphtheria:		Dysentery.....	5
Cook County.....	61	Hookworm disease.....	21
Scattering.....	32	Influenza.....	17
Influenza.....	7	Malaria.....	11
Lethargic encephalitis—Chicago.....	1	Measles.....	52
Measles.....	886	Pellagra.....	8
Pneumonia.....	221	Pneumonia.....	91
Poliomyelitis—Carroll County.....	1	Smallpox.....	13
Scarlet fever:		Tuberculosis.....	52
Cook County.....	120	Typhoid fever.....	19
La Salle County.....	9	Whooping cough.....	7
Scattering.....	69		
Smallpox:		MAINE.	
Lake County.....	12	Cerebrospinal meningitis.....	1
Scattering.....	31	Chicken pox.....	10
Tuberculosis.....	266	Diphtheria.....	9
Typhoid fever.....	11	German measles.....	4
Whooping cough.....	120	Measles.....	50

Reports for Week Ended May 31, 1924—Continued.

MAINE—continued.		Cases.	MINNESOTA—continued.		Cases.
Mumps	.....	10	Lethargic encephalitis	.....	1
Pneumonia	.....	7	Measles	.....	133
Scarlet fever	.....	23	Pneumonia	.....	15
Tuberculosis	.....	9	Scarlet fever	.....	170
Typhoid fever	.....	1	Smallpox	.....	28
Vincent's angina	.....	1	Tuberculosis	.....	53
Whooping cough	.....	59	Typhoid fever	.....	7
MARYLAND. ¹			Whooping cough	.....	14
Cerebrospinal meningitis	.....	1	MISSISSIPPI.		
Chicken pox	.....	58	Diphtheria	.....	6
Diphtheria	.....	32	Scarlet fever	.....	4
Dysentery	.....	1	Smallpox	.....	8
German measles	.....	30	Typhoid fever	.....	17
Influenza	.....	10	MISSOURI.		
Measles	.....	188	(Exclusive of Cape Girardeau.)		
Mumps	.....	29	Cerebrospinal meningitis	.....	1
Paratyphoid fever	.....	1	Chicken pox	.....	49
Pneumonia (all forms)	.....	44	Diphtheria	.....	62
Scarlet fever	.....	68	Influenza	.....	1
Septic sore throat	.....	2	Measles	.....	147
Tuberculosis	.....	32	Mumps	.....	81
Typhoid fever	.....	8	Pneumonia	.....	7
Whooping cough	.....	30	Scarlet fever	.....	99
MASSACHUSETTS.			Septic sore throat	.....	2
Cerebrospinal meningitis	.....	1	Smallpox	.....	13
Chicken pox	.....	159	Trachoma	.....	54
Conjunctivitis (suppurative)	.....	16	Tuberculosis	.....	35
Diphtheria	.....	124	Typhoid fever	.....	5
German measles	.....	65	Whooping cough	.....	42
Hookworm disease	.....	1	MONTANA.		
Influenza	.....	4	Diphtheria	.....	3
Lethargic encephalitis	.....	1	Rocky Mountain spotted fever:		
Malaria	.....	2	Anita	.....	1
Measles	.....	650	Coalwood	.....	1
Mumps	.....	198	Laurel R. F. D.	.....	1
Ophthalmia neonatorum	.....	18	Ryegate	.....	1
Pellagra	.....	1	Tyler	.....	2
Pneumonia (lobar)	.....	72	Scarlet fever	.....	37
Poliomyelitis	.....	3	Smallpox	.....	21
Scarlet fever	.....	282	Typhoid fever	.....	1
Smallpox	.....	1	Tick paralysis—Roundup	.....	1
Tetanus	.....	1	NEBRASKA.		
Trichinosis	.....	1	Chicken pox	.....	21
Tuberculosis (all forms)	.....	141	Diphtheria	.....	6
Typhoid fever	.....	10	Measles	.....	17
Whooping cough	.....	86	Mumps	.....	7
MICHIGAN.			Scarlet fever	.....	8
Diphtheria	.....	61	Smallpox	.....	1
Measles	.....	421	Tuberculosis	.....	2
Pneumonia	.....	60	Whooping cough	.....	1
Scarlet fever	.....	170	NEW JERSEY.		
Smallpox	.....	113	Cerebrospinal meningitis	.....	2
Tuberculosis	.....	36	Chicken pox	.....	154
Typhoid fever	.....	6	Diphtheria	.....	77
Whooping cough	.....	38	Dysentery	.....	1
MINNESOTA.			Influenza	.....	4
Cerebrospinal meningitis	.....	3	Measles	.....	469
Chicken pox	.....	112	Pneumonia	.....	115
Diphtheria	.....	54	Poliomyelitis	.....	2
Influenza	.....	1	Scarlet fever	.....	134
			Typhoid fever	.....	3
			Whooping cough	.....	163

¹ Week ended Friday.

Reports for Week Ended May 31, 1924—Continued.

NEW MEXICO.		Cases.	TEXAS—continued.		Cases.
Chicken pox.....		3	Measles.....		102
Diphtheria.....		3	Mumps.....		28
Measles.....		16	Pneumonia.....		10
Mumps.....		1	Scarlet fever.....		7
Pneumonia.....		1	Smallpox.....		35
Scarlet fever.....		2	Tuberculosis.....		16
Smallpox.....		1	Typhoid fever.....		5
Tuberculosis.....		18	Whooping cough.....		32
Typhoid fever.....		1			
Whooping cough.....		1	VERMONT.		
NEW YORK.			Chicken pox.....		25
(Exclusive of New York City.)			Diphtheria.....		2
Cerebrospinal meningitis.....		2	Measles.....		52
Diphtheria.....		91	Mumps.....		4
Influenza.....		23	Scarlet fever.....		15
Measles.....		931	Whooping cough.....		4
Pneumonia.....		151	VIRGINIA		
Poliomyelitis.....		1	Smallpox—Albemarle County.....		4
Scarlet fever.....		244	WASHINGTON.		
Smallpox.....		1	Chicken pox.....		96
Typhoid fever.....		17	Diphtheria.....		16
Whooping cough.....		261	Measles.....		54
NORTH CAROLINA.			Mumps.....		12
Cerebrospinal meningitis.....		1	Scarlet fever.....		38
Chicken pox.....		87	Smallpox.....		23
Diphtheria.....		24	Tuberculosis.....		42
German measles.....		1	Typhoid fever.....		4
Measles.....		503	Whooping cough.....		15
Poliomyelitis.....		1	WEST VIRGINIA.		
Scarlet fever.....		42	Diphtheria.....		6
Septic sore throat.....		2	Scarlet fever.....		14
Smallpox.....		75	Smallpox.....		5
Typhoid fever.....		16	WISCONSIN.		
Whooping cough.....		236	Milwaukee:		
OREGON.			Chicken pox.....		104
Chicken pox.....		9	Diphtheria.....		12
Diphtheria.....		12	Measles.....		22
Measles.....		28	Pneumonia.....		2
Mumps.....		5	Scarlet fever.....		14
Pneumonia.....		14	Tuberculosis.....		10
Scarlet fever:			Typhoid fever.....		1
Silverton.....		9	Whooping cough.....		16
Scattering.....		11	Scattering:		
Smallpox:			Cerebrospinal meningitis.....		1
Portland.....		11	Chicken pox.....		133
Scattering.....		3	Diphtheria.....		30
Typhoid fever.....		1	German measles.....		55
Whooping cough.....		11	Influenza.....		50
SOUTH DAKOTA.			Measles.....		374
Chicken pox.....		12	Pneumonia.....		29
Diphtheria.....		6	Scarlet fever.....		115
Measles.....		59	Smallpox.....		18
Mumps.....		1	Tuberculosis.....		29
Pneumonia.....		1	Typhoid fever.....		13
Scarlet fever.....		28	Whooping cough.....		127
Typhoid fever.....		1	WYOMING.		
Whooping cough.....		6	Chicken pox.....		4
TEXAS			Measles.....		89
Anthrax.....		1	Mumps.....		16
Cerebrospinal meningitis.....		1	Ophthalmia neonatorum.....		1
Chicken pox.....		21	Pneumonia.....		1
Diphtheria.....		19	Rocky Mountain spotted fever.....		3
Influenza.....		13	Scarlet fever.....		1
			Smallpox.....		1
			Whooping cough.....		9

¹Deaths.

SUMMARY OF MONTHLY REPORTS FROM STATES.

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

State.	Cerebro-spinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
<i>April, 1924.</i>										
Colorado.....	1	213	8	-----	1,705	-----	-----	162	3	3
Georgia.....	-----	42	311	55	329	4	-----	36	393	12
Hawaii.....	1	23	36	-----	9	-----	-----	-----	-----	18
Iowa.....	-----	52	-----	-----	299	-----	2	207	71	-----
Kansas.....	3	116	27	0	3,308	0	3	284	239	17
Montana.....	2	37	1	-----	552	-----	4	109	88	6
Oregon.....	-----	109	8	-----	437	-----	-----	103	107	5
Virginia.....	6	96	2,578	99	2,648	9	5	138	27	46

Number of Cases of Certain Communicable Diseases Reported for the Month of March, 1924, by State Health Officers.

State.	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Smallpox.	Tuberculosis.	Typhoid fever.	Whooping cough.
Alabama.....	357	41	3,159	244	27	218	118	51	482
Arizona.....	31	18	473	21	34	6	78	1	2
Arkansas.....	135	22	1,829	145	20	37	-----	12	192
California ¹	-----	-----	-----	-----	-----	-----	-----	-----	-----
Colorado.....	195	140	2,022	475	158	11	251	10	78
Connecticut.....	311	196	782	856	806	29	134	13	187
Delaware.....	25	17	35	24	59	-----	15	-----	13
Dist. of Columbia.....	289	31	59	-----	169	40	117	7	53
Florida.....	81	53	652	75	32	11	136	34	35
Georgia.....	115	67	1,082	204	60	583	59	9	176
Idaho.....	-----	12	-----	-----	30	8	-----	7	-----
Illinois.....	1,471	671	2,659	2,081	1,509	95	1,111	43	680
Indiana.....	364	222	2,964	-----	510	526	-----	19	394
Iowa.....	59	77	862	232	287	66	-----	(²)	66
Kansas.....	458	159	6,136	1,550	295	215	169	11	432
Kentucky ³	-----	-----	-----	-----	-----	-----	-----	-----	-----
Louisiana.....	27	81	1,308	6	41	86	-----	26	37
Maine.....	-----	58	-----	-----	167	4	-----	12	-----
Maryland.....	773	156	1,173	177	673	24	228	34	232
Massachusetts.....	1,121	648	4,052	1,779	2,103	1	649	24	422
Michigan.....	965	636	3,277	1,436	1,866	760	216	51	348
Minnesota.....	722	287	1,006	-----	1,186	340	342	21	117
Mississippi.....	852	70	5,940	938	28	49	312	68	1,902
Missouri.....	234	257	1,847	432	665	231	105	25	300
Montana.....	63	56	1,269	16	107	111	54	3	55
Nebraska ¹	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nevada ¹	-----	-----	-----	-----	-----	-----	-----	-----	-----
New Hampshire ⁴	-----	-----	-----	-----	-----	-----	-----	-----	-----
New Jersey.....	1,041	448	2,735	-----	810	41	447	21	477
New Mexico.....	77	49	1,212	40	35	6	61	5	15
New York.....	2,836	1,428	15,035	2,624	3,121	37	1,923	115	2,065
North Carolina.....	1,029	105	9,520	-----	209	658	-----	16	1,823
North Dakota.....	72	90	1,177	74	292	38	21	5	76
Ohio.....	1,514	628	2,231	2,468	1,636	741	708	75	1,156
Oklahoma.....	176	118	2,741	3	97	267	77	20	4
Oregon.....	81	121	1,000	34	66	117	65	14	41
Pennsylvania.....	3,216	1,280	3,695	3,450	2,154	20	546	74	1,663
Rhode Island.....	65	49	12	96	485	-----	60	-----	18
South Carolina.....	87	84	1,439	336	15	236	5	5	107
South Dakota.....	125	45	1,574	2	250	18	43	3	57
Tennessee.....	331	39	1,950	-----	53	379	-----	15	525
Texas ³	-----	-----	-----	-----	-----	-----	-----	-----	-----
Utah ⁴	-----	-----	-----	-----	-----	-----	-----	-----	-----
Vermont.....	104	11	762	79	51	14	-----	1	128
Virginia.....	861	157	3,323	-----	217	54	-----	24	1,998
Washington.....	303	151	2,200	176	264	283	194	12	128
West Virginia.....	227	106	3,918	-----	172	114	81	41	564
Wisconsin.....	1,016	286	1,908	67	1,414	138	159	17	741
Wyoming.....	43	5	513	8	23	-----	-----	6	33

¹ Reports not received at time of going to press.

² Reports not required by law.

³ Reports received weekly.

⁴ Reports received annually.

SUMMARY OF MONTHLY REPORTS FROM STATES—Continued.

Case Rates per 1,000 Population (Annual Basis) for the Month of March, 1924.

State.	Chicken pox.	Diph- theria.	Measles.	Mumps.	Scarlet fever.	Small- pox.	Tuber- culosis.	Typhoid fever.	Whoop- ing cough.
Alabama.....	1.72	0.20	15.25	1.18	0.13	1.05	0.57	0.25	2.33
Arizona.....	.93	.54	14.16	.63	1.02	.18	2.34	.03	.06
Arkansas.....	.87	.14	11.77	.93	.13	.24		.06	1.24
California ¹									
Colorado.....	2.29	1.65	23.76	5.58	1.86	.13	2.96	.12	.92
Connecticut.....	2.44	1.54	6.14	6.72	6.33	.23	1.05	.10	1.47
Delaware.....	1.27	.86	1.78	1.22	2.99		.76		.66
District of Columbia.....	7.80	.84	1.59		4.56	1.08	3.16	.19	1.43
Florida.....	.89	.59	7.20	.83	.35	.12	1.50	.89	.39
Georgia.....	.45	.26	4.22	.80	.23	2.27	.23	.04	.69
Idaho.....		.29			.74	.20		.17	
Illinois.....	2.53	1.15	4.56	3.57	2.59	.16	1.91	.07	1.17
Indiana.....	1.42	.86	11.52		1.98	2.04		.07	1.53
Iowa.....	.28	.37	4.09	1.10	1.36	.31		(?)	.31
Kansas.....	2.99	1.04	40.12	10.14	1.92	1.41	1.11	.07	2.82
Kentucky ²									
Louisiana.....	.17	.51	8.28	.04	.26	.54		.16	.23
Maine.....		.88			2.53	.06		.18	
Maryland.....	6.06	1.21	9.10	1.37	5.22	.19	1.77	.26	1.80
Massachusetts.....	3.25	1.88	11.73	5.15	6.09	.00	1.88	.07	1.22
Michigan.....	2.80	1.85	9.51	4.17	5.42	2.21	.63	.15	1.01
Minnesota.....	3.37	1.34	5.11		5.53	1.59	1.60	.10	.55
Mississippi.....	5.62	.46	39.17	6.18	.18	.32	2.06	.45	12.54
Missouri.....	.89	.88	6.31	1.48	2.27	.79	.36	.09	1.03
Montana.....	1.18	1.05	23.82	.39	2.01	2.08	1.01	.06	1.03
Nebraska ¹									
Nevada ¹									
New Hampshire ⁴									
New Jersey.....	3.57	1.54	9.38		2.78	.14	1.53	.07	1.64
New Mexico.....	2.42	1.54	38.09	1.26	1.10	.19	1.92	.16	.47
New York.....	3.05	1.54	16.17	2.82	3.36	.04	2.07	.12	2.22
North Carolina.....	4.46	.46	41.28		.91	2.85		.07	7.91
North Dakota.....	1.25	1.56	20.46	1.29	5.08	.66	.37	.09	1.32
Ohio.....	2.87	1.19	4.24	4.69	3.11	1.41	1.34	.14	2.19
Oklahoma.....	.94	.63	14.71	.02	.52	1.43	.41	.11	.02
Oregon.....	1.15	1.71	14.15	.48	.93	1.65	.92	.20	.58
Pennsylvania.....	4.12	1.64	4.74	4.42	2.76	.03	.70	.09	2.13
Rhode Island.....	1.21	.91	.22	1.79	9.05		1.12		.34
South Carolina.....	.58	.56	9.64	2.25	.10	1.58	.03	.03	.72
South Dakota.....	2.23	.80	28.12	.04	4.47	.32	.77	.05	1.02
Tennessee.....	1.62	.19	9.56		.26	1.86		.07	2.57
Texas ³									
Utah ⁴									
Vermont.....	3.48	.37	25.53	2.65	1.71	.47		.63	4.29
Virginia.....	4.19	.76	16.19		1.06	.26		.12	9.73
Washington.....	2.46	1.22	17.84	1.43	2.14	2.39	1.57	.19	1.04
West Virginia.....	1.70	.79	2.38		1.29	.85	.61	.31	4.22
Wisconsin.....	4.33	1.22	8.13	.28	6.03	.59	.68	.67	3.16
Wyoming.....	2.34	.27	27.93	.44	1.25			.33	1.80

¹ Reports not received at time of going to press.² Reports not required by law.³ Reports received weekly.⁴ Reports received annually.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES.

Diphtheria.—For the week ended May 17, 1924, 35 States reported 1,540 cases of diphtheria. For the week ended May 19, 1923, the same States reported 1,460 cases. One hundred and one cities, situated in all parts of the country and having an aggregate population of about 28,600,000, reported 916 cases of diphtheria for the week ended May 17, 1924. Last year for the corresponding week they reported 935 cases. The estimated expectancy for these cities was 999 cases. The estimated expectancy was based on the experience of the last nine years, excluding epidemics.

Measles.—Thirty States reported 9,826 cases of measles for the week this year, and 23,191 cases for the week last year. One hundred and one cities reported 4,003 cases of measles for the week this year, and 9,463 cases last year.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-five States—this year, 3,170 cases; last year, 3,132 cases. One hundred and one cities—this year, 1,476 cases; last year, 1,569 cases; estimated expectancy, 922 cases.

Smallpox.—The reports of smallpox continue to show that there is much needless suffering and many deaths in widely separated communities caused by neglect of vaccination and revaccination. Thirty-five States reported 1,233 cases of smallpox for the week this year, and 469 cases for the corresponding week of last year. One hundred and one cities reported 522 cases for the week this year, and 90 cases last year. The estimated expectancy for these cities was 182 cases.

Typhoid fever.—This disease was reported for the week as follows: Thirty-three States—235 cases this year; 245 cases last year. One hundred and one cities—71 cases this year; 62 cases last year. The estimated expectancy for these cities was 80 cases.

City reports for week ended May 17, 1924.

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1915 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city.	Chick- en pox, cases re- ported.	Diphtheria.		Influenza.		Mea- sles, cases re- ported.	Mumps, cases re- ported.	Pneu- monia, deaths re- ported.	Scarlet fever.	
		Cases, esti- mated expect- ancy.	Cases re- ported.	Cases re- ported.	Deaths re- ported.				Cases, esti- mated expect- ancy.	Cases re- ported.
NEW ENGLAND.										
Maine:										
Lewiston.....	2	1	2	0	0	18	1	0	5	2
Portland.....	3	1	3	0	0	3	49	2	3	0
New Hampshire:										
Concord.....	0	0	0	0	0	12	0	1	1	0
Nashua.....	0	1	0	0	0	0	0	1	1	1
Vermont:										
Barre.....	0	0	0	0	0	0	0	0	2	0
Burlington.....	2	1	1	0	0	4	0	0	1	0
Massachusetts:										
Boston.....	26	54	44	5	0	164	34	23	46	101
Fall River.....	1	3	4	0	0	24	5	4	3	9
Springfield.....	2	3	4	0	0	16	4	2	5	12
Worcester.....	7	4	8	5	0	9	16	3	6	13
Rhode Island:										
Pawtucket.....	0	1	1	0	0	1	0	2	1	7
Providence.....	0	10	7	0	0	1	0	4	9	36
Connecticut:										
Bridgeport.....	0	5	2	1	1	1	0	4	4	5
Hartford.....	1	6	5	0	0	21	21	2	3	22
New Haven.....	6	4	0	0	0	19	33	5	4	8

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
MIDDLE ATLANTIC.										
New York:										
Buffalo.....	0	12	16	0	0	33	0	5	19	18
New York.....	202	305	221	15	14	1,362	152	199	186	268
Rochester.....	5	8	0	0	0	26	24	7	12	13
Syracuse.....	6	7	9	0	0	54	3	10	10	20
New Jersey:										
Camden.....		4	7	0	0	2		5	2	8
Newark.....	39	17	12	1	0	199	76	12	18	30
Trenton.....	1	4	8		1	14	0	5	3	0
Pennsylvania:										
Philadelphia.....	99	63	59		7	150	100	51	69	69
Pittsburgh.....	33	20	21		3	24	142	47	19	23
Reading.....	5	2	4	0	0	4	40	2	2	3
Scranton.....	3	3	3	0	0	3	1	2	2	0
E. NORTH CENTRAL.										
Ohio:										
Cincinnati.....	17	10	1	1	0	71	12	5	9	10
Cleveland.....	72	19	16	3	3	109	196	26	24	9
Columbus.....	9	2	5	0	0	0	2	3	4	19
Toledo.....	26	4	4		2	115	1	7	11	18
Indiana:										
Fort Wayne.....		3							1	
Indianapolis.....		8	1	0	0	68		6	18	8
South Bend.....		1	3	0	0	11		1	2	11
Terre Haute.....	4	1	0	0	0	0	0	2	3	6
Illinois:										
Chicago.....	114	117	66	12	2	266	99	48	91	123
Cicero.....	0	3	0	0	0	2	20	1	1	1
Springfield.....	11	1	0	0	0	5	1	1	2	3
Michigan:										
Detroit.....	88	57	47	5	0	153	114	35	66	89
Flint.....	20	4	6	0	0	2	14	2	5	6
Grand Rapids.....	8	3	1	0	0	6	18	0	6	18
Saginaw.....	8	1	0	0	0	21	1	1	2	21
Wisconsin:										
Madison.....	5	1	2	0	0	1	0	0	2	8
Milwaukee.....	138	11	15	0	0	39	0	0	27	17
Racine.....		1							5	
Superior.....		1	0	0	0	0		1	2	1
W. NORTH CENTRAL.										
Minnesota:										
Duluth.....	13	2	0	0	0	9	2	5	4	32
Minneapolis.....	86	15	24		2	24	13	14	27	43
St. Paul.....		14	33		1	13		6	17	27
Iowa:										
Des Moines.....	1	1	1	0		0	0		9	3
Sioux City.....	0	1	2	0		2	0		3	2
Waterloo.....	1	0	0	0		3	17		2	1
Missouri:										
Kansas City.....	4	7	3	1	1	33	12	7	9	10
St. Joseph.....	3	1	2	0	0	2	7	0	2	4
St. Louis.....		47	43	0	0	61			26	86
North Dakota:										
Fargo.....	0	1	0	0	0	0	0	1	1	0
Grand Forks.....	1	1	0	0	0	4	0	0	1	0
South Dakota:										
Aberdeen.....	3		0	0	0	15	0	0		0
Sioux Falls.....	5	0	0	0	0	0	0	0	2	5
Nebraska:										
Lincoln.....		1	6	0	0	1		2	2	1
Omaha.....	6	3	2	0	0	23	1	8	10	2
Kansas:										
Topeka.....	11	1	1	0	0	18	5	0	2	6
Wichita.....	2	1	1	0	0	6	40	0	3	4

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Chick- en pox, cases re- ported.	Diphtheria.		Influenza.		Meas- les, cases re- ported.	Mumps, cases re- ported.	Pneu- monia, deaths re- ported.	Scarlet fever.	
		Cases, es- timated ex- pectancy.	Cases re- ported.	Cases re- ported.	Deaths re- ported.				Cases, es- timated ex- pectancy.	Cases re- ported.
MOUNTAIN—contd.										
Idaho:										
Boise.....	2	1	1	0	0	6	0	0	2	
Colorado:										
Denver.....	32	9	14	0	1	69	10	8	10	16
Pueblo.....	4	1	0	0	0	7	5	0	1	1
New Mexico:										
Albuquerque... Utah:	0	2	0	1	1	11	0	1	1	0
Salt Lake City. Nevada:	35	3	1	0	0	12	3	3	3	1
Reno.....	0	0	0	0	0	1	9	0	1	0
PACIFIC										
Washington:										
Seattle.....	38	5	10	0	0	11	7	0	6	14
Spokane.....	1	3	3	0	0	0	0	0	4	22
Tacoma.....	3	2	1	0	0	4	5	0	1	2
Oregon:										
Portland.....	3	3	4	0	0	3	2	6	9	3
California:										
Los Angeles.....	97	24	65	1	1	183	7	15	11	43
Sacramento.....	3	2	13	0	0	8	0	0	1	4
San Francisco.....	66	23	46	0	0	24	16	5	13	28

Division, State, and city.	Popula- tion, July 1, 1923, estimated.	Smallpox.			Tubercu- losis, deaths reported.	Typhoid fever.			Whooping cough, cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
NEW ENGLAND.										
Maine:										
Lewiston.....	33,790	0	0	0	1	0	0	0	0	11
Portland.....	73,129	0	0	0	1	0	0	0	2	28
New Hampshire:										
Concord.....	22,408	0	0	0	0	0	0	0	0	10
Nashua.....	29,234	0	0	0	1	0	0	0	0	12
Vermont:										
Barre.....	110,068	0	0	0	2	0	0	0	0	3
Burlington.....	23,613	0	0	0	0	0	0	0	0	3
Massachusetts:										
Boston.....	770,400	0	0	0	16	3	2	0	13	238
Fall River.....	120,912	0	0	0	1	1	0	0	10	31
Springfield.....	144,227	0	0	0	2	0	0	0	6	38
Worcester.....	191,927	0	0	0	2	0	0	0	0	50
Rhode Island:										
Pawtucket.....	68,799	0	0	0	0	0	0	0	0	14
Providence.....	242,378	0	0	0	5	0	0	0	3	72
Connecticut:										
Bridgeport.....	1143,555	0	0	0	1	0	0	0	2	29
Hartford.....	1138,686	0	0	0	1	0	0	0	2	42
New Haven.....	172,967	0	0	0	2	0	0	0	2	37
MIDDLE ATLANTIC.										
New York:										
Buffalo.....	536,718	0	0	0	16	1	2	0	31	141
New York.....	5,927,625	0	0	0	117	11	17	1	175	1,418
Rochester.....	317,867	0	0	0	4	0	1	0	1	72
Syracuse.....	184,511	0	0	0	3	0	0	0	3	47

¹ Population Jan. 1, 1920.

² Palmonary only.

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough, cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
MIDDLE ATLANTIC—continued.										
New Jersey:										
Camden.....	124, 157	0	0	0	2	0	2	0	---	36
Newark.....	438, 699	0	0	0	15	1	0	0	40	111
Trenton.....	127, 390	0	0	0	4	1	0	0	8	43
Pennsylvania:										
Philadelphia.....	1, 922, 788	0	5	0	36	8	10	2	68	473
Pittsburgh.....	613, 442	0	0	0	13	2	0	0	52	209
Reading.....	110, 917	0	0	0	2	0	0	0	6	32
Scranton.....	140, 636	0	0	0	2	0	0	0	6	---
EAST NORTH CENTRAL.										
Ohio:										
Cincinnati.....	406, 312	1	4	0	14	1	1	0	24	116
Cleveland.....	888, 519	1	1	0	12	2	2	0	96	205
Columbus.....	261, 082	1	7	0	7	1	0	0	8	58
Toledo.....	268, 338	4	25	0	5	0	0	0	31	61
Indiana:										
Fort Wayne.....	93, 573	3	---	---	---	0	---	---	---	---
Indianapolis.....	342, 718	8	49	0	7	1	0	0	---	93
South Bend.....	76, 709	0	0	0	0	0	0	0	---	19
Terre Haute.....	68, 939	0	0	0	0	0	0	0	1	19
Illinois:										
Chicago.....	2, 886, 121	2	10	0	58	3	4	0	40	663
Cicero.....	55, 968	0	0	0	1	0	0	0	1	13
Springfield.....	61, 833	1	0	0	2	0	0	0	2	23
Michigan:										
Detroit.....	995, 668	10	118	15	27	4	3	0	36	306
Flint.....	117, 968	2	11	2	0	1	1	0	1	24
Grand Rapids.....	145, 947	1	0	0	2	1	0	0	4	30
Saginaw.....	69, 754	0	0	0	2	1	0	0	1	23
Wisconsin:										
Madison.....	42, 519	1	0	0	0	0	0	0	14	6
Milwaukee.....	484, 595	4	0	0	8	1	0	0	26	88
Racine.....	64, 393	0	---	---	---	---	---	---	---	---
Superior.....	139, 671	1	3	0	0	0	0	0	---	11
WEST NORTH CENTRAL.										
Minnesota:										
Duluth.....	106, 289	2	4	1	0	1	0	0	1	26
Minneapolis.....	409, 125	19	4	1	6	1	0	0	4	130
St. Paul.....	241, 891	9	22	0	9	0	0	0	---	66
Iowa:										
Des Moines.....	140, 923	3	3	---	---	0	0	---	0	---
Sioux City.....	79, 662	2	0	---	---	0	0	---	0	---
Waterloo.....	39, 667	1	0	---	---	1	0	---	0	---
Missouri:										
Kansas City.....	351, 819	7	0	0	4	1	1	0	10	66
St. Joseph.....	78, 232	10	0	0	1	0	0	0	0	27
St. Louis.....	803, 853	9	0	0	14	2	2	1	---	185
North Dakota:										
Fargo.....	24, 841	0	0	0	2	0	0	0	0	12
Grand Forks.....	14, 547	0	0	0	0	0	0	0	0	---
South Dakota:										
Aberdeen.....	15, 829	---	0	0	0	---	0	0	1	---
Sioux Falls.....	29, 206	1	1	0	0	0	0	0	0	6
Nebraska:										
Lincoln.....	58, 761	3	0	0	0	0	0	0	---	14
Omaha.....	204, 382	9	4	0	1	0	0	0	0	59
Kansas—										
Topeka.....	52, 555	0	0	0	1	0	0	0	1	12
Wichita.....	79, 261	6	4	0	1	0	0	0	5	27
SOUTH ATLANTIC.										
Delaware:										
Wilmington.....	117, 728	0	---	---	---	0	---	---	---	---
Maryland:										
Baltimore.....	773, 580	0	1	0	15	5	1	1	25	243
Cumberland.....	32, 361	0	0	0	0	0	0	0	---	10
Frederick.....	11, 301	0	0	0	0	1	0	0	---	4

¹ Population Jan. 1, 1920.

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Population, July 1, 1922, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough, cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
SOUTH ATLANTIC—continued.										
District of Columbia:										
Washington.....	1 437, 571	1	7	0	9	2	0	0	11	136
Virginia:										
Lynchburg.....	30, 277	0	0	0	0	0	1	0	4	10
Norfolk.....	159, 069	1	0	0	5	1	0	0	1	1
Richmond.....	181, 044	0	0	0	3	0	1	0	7	50
Roanoke.....	55, 502	1	0	0	0	0	0	0	2	13
West Virginia:										
Charleston.....	45, 597	1	1	0	2	0	1	0	1	23
Huntington.....	57, 918	0	1	0	0	1	0	0	0	0
Wheeling.....	1 56, 208	0	0	0	0	0	1	1	1	17
North Carolina:										
Raleigh.....	29, 171	0	10	0	1	0	0	0	1	8
Wilmington.....	35, 719	0	0	0	0	0	0	0	0	11
Winston-Salem.....	56, 230	3	3	0	1	0	0	0	0	22
South Carolina:										
Charleston.....	71, 245	0	4	0	5	1	0	0	0	30
Columbia.....	39, 688	0	0	0	0	1	1	0	1	20
Greenville.....	25, 789	0	5	0	0	1	0	0	5	3
Georgia:										
Atlanta.....	222, 963	5	20	0	4	0	0	0	0	71
Brunswick.....	15, 937	0	0	0	1	0	0	0	0	6
Savannah.....	89, 448	1	0	0	3	2	1	0	0	29
Florida:										
St. Petersburg.....	24, 403	0	0	0	2	0	0	0	1	9
Tampa.....	56, 050	0	0	0	1	1	1	0	0	14
EAST SOUTH CENTRAL.										
Kentucky:										
Covington.....	57, 877	0	0	0	2	1	0	0	0	19
Lexington.....	43, 673	0	0	0	1	0	0	0	0	16
Louisville.....	257, 671	2	0	0	4	2	2	0	0	72
Tennessee:										
Memphis.....	170, 067	2	0	0	3	1	1*	0	15	49
Nashville.....	121, 128	0	2	0	3	1	3	0	0	51
Alabama:										
Birmingham.....	195, 901	1	49	0	8	2	0	0	10	66
Mobile.....	63, 858	1	1	0	0	0	0	0	0	21
Montgomery.....	45, 383	1	2	0	2	0	1	0	0	13
WEST SOUTH CENTRAL.										
Arkansas:										
Fort Smith.....	30, 635	0	0	0	0	0	0	0	1	0
Little Rock.....	70, 916	1	0	0	0	0	0	0	0	0
Louisiana:										
New Orleans.....	404, 575	5	1	0	14	3	3	0	2	132
Shreveport.....	54, 590	5	5	0	1	0	0	0	0	26
Oklahoma:										
Oklahoma.....	101, 150	4	2	0	1	0	1	0	0	19
Texas:										
Dallas.....	177, 274	3	0	0	7	0	0	0	1	49
Galveston.....	46, 877	0	0	0	1	1	0	0	0	8
Houston.....	154, 970	1	1	0	5	0	0	0	0	42
San Antonio.....	184, 727	0	0	0	12	1	0	0	0	80
MOUNTAIN.										
Montana:										
Billings.....	16, 927	0	0	0	0	0	0	0	0	10
Great Falls.....	27, 787	3	1	0	0	0	0	0	5	5
Helena.....	1 12, 037	0	0	0	0	0	0	0	0	7
Missoula.....	1 12, 668	1	4	0	0	0	0	0	0	2
Idaho:										
Boise.....	22, 806	0	1	0	0	0	0	0	0	4
Colorado:										
Denver.....	272, 031	10	0	0	8	0	0	0	13	63
Pueblo.....	43, 519	0	0	0	3	0	0	0	0	10
New Mexico:										
Albuquerque.....	16, 648	0	0	0	3	0	0	0	0	9

* Population Jan. 1, 1920.

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Tuberculosis, deaths reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
MOUNTAIN—continued.										
Utah:										
Salt Lake City.....	126,241	5	0	0	4	0	0	0	1	44
Nevada:										
Reno.....	12,429	0	0	0	0	0	0	0	0	6
PACIFIC.										
Washington:										
Seattle.....	¹ 315,685	6	1			0	0		2	
Spokane.....	104,573	13	13			0	0		0	
Tacoma.....	101,731	1	1			0	2		3	
Oregon:										
Portland.....	273,621	8	3	0	3	1	0	0	0	50
California:										
Los Angeles.....	666,853	2	137	0	22	2	4	1	7	202
Sacramento.....	69,950	0	0	0	4	1	0	0	0	30
San Francisco.....	539,038	1	2	0	4	2	0	0	4	156

Division, State, and city.	Cerebrospinal meningitis.		Lethargic encephalitis.		Pellagra.		Poliomyelitis (infantile paralysis).			
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases, est. ex- pectan- cy.	Cases.	Deaths.	
NEW ENGLAND.										
New Hampshire:										
Concord.....	0	1	0	0	0	0	0	0	0	0
Vermont:										
Burlington.....	0	0	0	0	0	0	0	1	0	0
Massachusetts:										
Boston.....	0	0	0	0	0	0	0	1	0	0
Rhode Island:										
Pawtucket.....	0	0	0	0	0	0	0	1	0	0
MIDDLE ATLANTIC.										
New York:										
New York.....	4	0	3	0	1	1	1	0	0	0
New Jersey:										
Newark.....	2	0	6	0	0	0	0	0	0	0
Trenton.....	0	0	0	0	0	0	0	1	0	0
Pennsylvania:										
Philadelphia.....	0	0	1	0	0	0	0	1	0	0
EAST NORTH CENTRAL.										
Ohio:										
Cleveland.....	1	1	2	0	0	0	0	0	0	0
Illinois:										
Chicago.....	0	0	1	0	0	0	1	0	0	0
Michigan:										
Detroit.....	1	0	0	0	0	0	0	0	0	0
Wisconsin:										
Milwaukee.....	0	1	0	0	0	0	1	0	0	0
Superior.....	0	1	0	0	0	0	0	0	0	0
WEST NORTH CENTRAL.										
Nebraska:										
Omaha.....	0	0	1	1	0	0	0	0	0	0

¹ Population Jan. 1, 1920.

City reports for week ended May 17, 1924—Continued.

Division, State, and city.	Cerebrospinal meningitis.		Lethargic encephalitis.		Pellagra.		Poliomyelitis (infantile paralysis).		
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases, est. expectancy.	Cases.	Deaths.
SOUTH ATLANTIC.									
Maryland:									
Baltimore.....	0	0	1	1	0	0	0	1	0
District of Columbia:									
Washington.....	0	0	0	0	0	0	0	1	1
Virginia:									
Lynchburg.....	0	0	0	0	0	1	0	0	0
Richmond.....	0	0	0	0	1	0	0	0	0
North Carolina:									
Raleigh.....	0	0	0	0	0	1	0	0	0
South Carolina:									
Charleston.....	0	0	0	0	0	1	0	0	0
Columbia.....	0	0	0	0	0	2	0	0	0
Georgia:									
Savannah.....	0	0	0	0	2	2	0	0	0
Florida:									
Tampa.....	1	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL.									
Alabama:									
Mobile.....	0	0	0	1	0	1	0	0	0
WEST SOUTH CENTRAL.									
Arkansas:									
Little Rock.....	0	0	1	1	0	0	0	0	0
Louisiana:									
New Orleans.....	0	0	0	0	1	0	0	0	0
Texas:									
Dallas.....	0	0	0	0	0	1	0	0	0
Houston.....	0	0	0	0	0	1	0	0	0
San Antonio.....	0	1	0	1	0	1	0	0	0
PACIFIC.									
California:									
Los Angeles.....	0	0	0	0	1	0	0	0	0

The following table gives a summary of the reports from 105 cities for the nine-week period ended May 17, 1924. The cities included in this table are those whose reports have been published for all nine weeks in the Public Health Reports. Eight of these cities did not report deaths. The aggregate population of the cities reporting cases was estimated at nearly 29,000,000 on July 1, 1923, which is the latest date for which estimates are available. The cities reporting deaths had more than 28,000,000 population on that date. The number of cities included in each group and the aggregate population are shown in a separate table below.

Summary of weekly reports from cities, March 16 to May 17, 1924.

DIPHTHERIA CASES.

	1924, week ended—								
	Mar. 22.	Mar. 29.	Apr. 5.	Apr. 12.	Apr. 19.	Apr. 26.	May 3.	May 10.	May 17.
Total.....	1, 113	1, 038	1, 039	1, 006	1, 009	988	897	894	929
New England.....	135	103	105	102	99	111	97	83	78
Middle Atlantic.....	415	391	383	384	374	400	344	395	357
East North Central.....	229	200	219	210	211	156	173	157	168
West North Central.....	86	66	74	60	60	71	68	64	110
South Atlantic.....	61	42	61	52	52	50	40	31	41
East South Central.....	17	10	17	8	14	13	6	8	3
West South Central.....	21	32	23	24	31	33	18	25	16
Mountain.....	25	31	30	40	52	31	35	29	18
Pacific.....	124	163	127	126	116	123	116	102	138

MEASLES CASES.

Total.....	7, 026	6, 590	6, 070	6, 237	5, 147	5, 203	4, 768	4, 431	4, 012
New England.....	430	443	374	401	353	354	379	339	271
Middle Atlantic.....	2, 467	2, 354	2, 394	2, 647	2, 347	2, 184	2, 310	1, 889	1, 868
East North Central.....	659	674	806	838	675	829	703	862	1, 776
West North Central.....	925	766	569	415	359	350	257	274	197
South Atlantic.....	675	621	572	626	467	518	484	455	463
East South Central.....	231	173	126	156	159	173	98	73	56
West South Central.....	514	560	354	323	188	127	104	70	51
Mountain.....	634	444	405	241	179	193	113	97	100
Pacific.....	491	525	470	590	400	475	320	372	230

SCARLET FEVER CASES.

Total.....	1, 923	1, 966	1, 737	1, 796	1, 658	1, 532	1, 621	1, 563	1, 515
New England.....	337	363	312	326	263	271	242	210	213
Middle Atlantic.....	532	552	517	498	474	467	473	470	452
East North Central.....	376	370	346	345	334	284	325	318	343
West North Central.....	270	254	184	230	222	185	197	219	228
South Atlantic.....	221	202	200	218	189	168	178	165	123
East South Central.....	17	30	11	18	16	12	16	19	9
West South Central.....	13	17	15	26	27	18	23	15	14
Mountain.....	22	28	16	20	19	23	27	37	25
Pacific.....	140	170	136	115	124	94	140	110	113

SMALLPOX CASES.

Total.....	565	602	544	536	467	568	550	465	528
New England.....	0	0	0	1	1	0	0	0	0
Middle Atlantic.....	0	6	1	1	0	6	0	0	5
East North Central.....	126	162	153	141	164	193	186	165	212
West North Central.....	77	72	52	61	41	62	53	33	39
South Atlantic.....	123	171	116	98	93	98	76	95	51
East South Central.....	25	38	49	45	26	55	49	20	54
West South Central.....	6	7	10	4	5	2	4	1	7
Mountain.....	4	7	8	4	10	6	5	6	6
Pacific.....	144	139	155	181	127	152	177	145	154

¹ Figures for Fort Wayne, Ind., and Racine, Wis., estimated. Reports not received at time of going to press.

² Figures for Wilmington, Del., estimated.

³ Figures for San Antonio, Tex., estimated.

⁴ Figures for San Francisco, Calif., estimated.

⁵ Figures for San Francisco, Calif., and Spokane, Wash., estimated.

Summary of weekly reports from cities, March 16 to May 17, 1924—Continued.

TYPHOID FEVER CASES.

	1924, week ended—									
	Mar. 22.	Mar. 29.	Apr. 5.	Apr. 12.	Apr. 19.	Apr. 26.	May 3.	May 10.	May 17.	
Total.....	60	76	51	52	55	58	49	69	73	
New England.....	2	4	1	4	4	7	4	9	2	
Middle Atlantic.....	19	26	9	21	17	11	10	25	32	
East North Central.....	8	7	7	7	7	10	11	9	12	
West North Central.....	5	5	7	2	6	1	3	2	3	
South Atlantic.....	1	11	9	10	4	8	11	11	8	
East South Central.....	13	10	1	1	4	8	3	3	7	
West South Central.....	2	8	9	2	4	6	3	3	3	
Mountain.....	1	1	2	1	4	0	1	3	0	
Pacific.....	9	4	6	4	5	7	3	4	6	

INFLUENZA DEATHS.

Total.....	85	96	97	95	80	72	51	60	49
New England.....	5	3	6	2	3	3	2	2	1
Middle Atlantic.....	28	45	44	35	31	30	21	32	25
East North Central.....	13	11	20	25	14	12	7	10	15
West North Central.....	3	4	2	8	4	4	3	3	4
South Atlantic.....	15	10	3	7	6	10	5	7	15
East South Central.....	9	8	13	6	11	8	3	4	4
West South Central.....	8	10	6	3	4	3	4	10	3
Mountain.....	2	2	1	2	4	2	0	1	1
Pacific.....	2	3	2	6	3	0	6	1	1

PNEUMONIA DEATHS.

Total.....	1, 173	1, 204	1, 251	1, 222	1, 101	959	941	783	743
New England.....	67	58	75	71	61	63	69	55	52
Middle Atlantic.....	495	525	500	494	474	430	392	332	343
East North Central.....	226	255	286	258	232	170	199	150	136
West North Central.....	54	72	71	74	64	49	53	42	41
South Atlantic.....	152	111	125	158	118	114	100	96	89
East South Central.....	69	47	61	53	57	42	44	29	22
West South Central.....	56	61	67	43	43	35	24	23	27
Mountain.....	20	37	39	32	25	26	27	24	13
Pacific.....	34	38	27	39	27	30	33	32	20

¹ Figures for Fort Wayne, Ind., and Racine, Wis., estimated. Reports not received at time of going to press.

² Figures for Wilmington, Del., estimated.

³ Figures for San Antonio, Tex., estimated.

⁴ Figures for San Francisco, Calif., estimated.

⁵ Figures for San Francisco, Calif., and Spokane, Wash., estimated.

Number of cities included in summary of weekly reports and aggregate population of cities in each group, estimated as of July 1, 1923.

Group of cities.	Number of cities reporting cases.	Number of cities reporting deaths.	Aggregate population of cities reporting cases.	Aggregate population of cities reporting deaths.
Total.....	105	97	28, 898, 350	28, 140, 934
New England.....	12	12	2, 098, 746	2, 098, 746
Middle Atlantic.....	10	10	10, 304, 114	10, 304, 114
East North Central.....	17	17	7, 032, 535	7, 032, 535
West North Central.....	14	11	2, 515, 330	2, 381, 454
South Atlantic.....	22	22	2, 566, 901	2, 566, 901
East South Central.....	7	7	911, 885	911, 885
West South Central.....	8	6	1, 124, 564	1, 023, 013
Mountain.....	9	9	546, 445	546, 445
Pacific.....	6	3	1, 797, 830	1, 275, 841

FOREIGN AND INSULAR.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	May 11-20, 1924.		Remain- ing under treatment May 20, 1924.
	New cases.	Deaths.	
Cerebrospinal meningitis.....			12
Chicken pox.....	8		10
Diphtheria.....	8	1	5
Leprosy.....	1		15
Malaria.....	10		119
Measles.....	1		5
Paratyphoid fever.....			1
Scarlet fever.....			1
Typhoid fever.....	11	2	29

- ¹ From the interior, 1.
- ² From the interior, 12.
- ³ From the interior, 16.

EGYPT.

Plague—Summary.

During the period January 1 to April 29, 1923, 178 cases of plague with 94 deaths were reported in Egypt. Of these, 1 case with 1 death occurred at Alexandria, 1 case at Port Said, and 8 cases with 4 deaths at Suez. The remaining cases were distributed in 9 Provinces. For distribution of occurrence according to locality, see page 1405.

JAMAICA.

Smallpox (Reported as Alastrim).

During the week ended May 3, 1924, 25 new cases of smallpox (alastrim) were reported in the Island of Jamaica.

Chicken Pox.

During the period under report eight new cases of chicken pox were reported in the Island of Jamaica.

MADAGASCAR

Plague—March 1-15, 1924.

During the period March 1 to 15, 1924, 123 cases of plague with 123 deaths were reported in the Island of Madagascar. The occurrence was among natives in the Province of Tananarive. For distribution of occurrence according to localities see page 1405.

MALTA.

Communicable Diseases—April 1-15, 1924.

Communicable diseases were reported in the island of Malta during the period April 1 to 15, 1924, as follows:

Dis ise.	Cases.	Remarks.	Disease.	Cases.	Remarks.
Broncho-pneumonia.....	1	Contracted abroad.	Pneumonia.....	3	
Chicken pox.....	2		Trachoma.....	10	
Influenza.....	3		Tuberculosis.....	5	
Malaria.....	1		Typhoid fever.....	5	
Measles.....	51		Undulant fever.....	21	
			Whooping cough.....	5	

NETHERLANDS.

Typhus Fever—Amsterdam.

During the week ended April 26, 1924, two cases of typhus fever were reported at Amsterdam, Netherlands.

UNION OF SOUTH AFRICA.

Status of Plague.

During the week ended April 12, 1924, 18 new cases of plague, occurring in natives, with 10 deaths, were reported in the Union of South Africa. The occurrence was distributed in the Cape Province, in two districts; Orange Free State, in five districts; and the Transvaal, at Vlakfontein, Krugersdorp district. Five deaths of cases reported during the week ended April 5, 1924, were reported. Total from December 16, 1923, to April 12, 1924: Cases, white 41, colored 243; total, 284. Deaths, white 21, colored 153; total, 174.

WEST AFRICA (FRENCH DAHOMEY).

Yellow Fever—Porto Novo.

Under date of May 26, the appearance of yellow fever was reported at Porto Novo, French Dahomey, West Africa.

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

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended June 6, 1924.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India.....				Mar. 23-29, 1924: Cases, 6,719; deaths, 3,861.
Rangoon.....	Apr. 6-19.....	4	4	

¹ From medical officers of the Public Health Service, American consuls, and other sources.

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

Reports Received During Week Ended June 6, 1924—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Porto Alegre	Apr. 20-26		2	
Ceylon:				
Colombo	Apr. 13-19	8	8	
Egypt:				
City—				
Alexandria	Apr. 2	1	1	
Port Said	Apr. 24	1		
Suez	Jan. 2-Apr. 28	8	4	
Province—				
Assiout	Apr. 1-May 1	27	19	
Charkieh	Jan. 31	1	1	
Fayoum	Feb. 18-May 1	46	8	
Gharbieh	Apr. 21	1	1	
Girgeh	Jan. 17-Apr. 25	7	2	
Kalioubieh	Jan. 6	1		
Kena	Apr. 9-29	41	29	
Menoufieh	Jan. 2-Apr. 21	38	24	
Minia	Feb. 5-Apr. 8	6	5	
India:				
Karachi	Apr. 20-26	25	19	
Rangoon	Apr. 6-19	27	23	
Madagascar:				
Tananarive Province.				
Tananarive Town	Mar. 1-15	14	14	
Other localities	do	109	109	
Straits Settlements:				
Singapore	Apr. 6-12	2	1	
Union of South Africa				
				Jan. 1-May 1, 1924: Cases, 178; deaths, 94.
				Mar. 23-29, 1924: Cases, 15,356; deaths, 11,768.
				Mar. 15, 1924: Cases, 123; deaths, 123. Bubonic, pneumonic, septicemic.
				Apr. 6-12, 1924: Cases, 18; deaths, 10. In natives. Five deaths in cases reported previous week.
				Total, Dec. 16, 1923-Apr. 12, 1924: Cases, 284 (white, 41); deaths, 174 (white, 31).

SMALLPOX.

Algeria:				
Algiers	Apr. 1-30	1		
British East Africa:				
Northern Rhodesia	Apr. 1-7	1		
Canada:				
Alberta—				
Calgary	May 11-17	2		
British Columbia—				
Vancouver	May 11-17	33		
Ontario—				
Ottawa	May 11-17	1		
China:				
Amoy	Apr. 6-19		2	
Antung	Apr. 14-May 4	3		
Chungking	Apr. 6-12			
Egypt:				
Cairo	Feb. 4-11	2		
Port Said	Apr. 16-22	2		
Finland				
India:				
Karachi	Apr. 20-26	22	11	
Madras	Apr. 13-19	37	11	
Rangoon	Apr. 6-19	20	6	
Jamaica				
Japan:				
Kobe	May 6-12	1		
Java:				
East Java—				
Soerabaya	Mar. 16-22	19	9	
West Java—				
Batavia	Apr. 5-11	19		
Mexico:				
Guadalajara	May 4-17		3	
Mexico City	Apr. 13-19	7		
Salina Cruz	Apr. 24-30	3	1	
Tampico	May 11-20	2	1	
				Prevalent.
				Imported.
				Apr. 1-15, 1924: Cases, 1.
				Mar. 23-29, 1924: Cases, 4,215; deaths, 932.
				Apr. 27-May 3, 1924: Cases, 26.
				Province.
				Including municipalities in Federal District.
				Five cases chickenpox in quarantine.

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

Reports Received During Week Ended June 6, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Portugal:				
Lisbon.....	Apr. 27-May 3.....	1		
Oporto.....	Apr. 27-May 3.....	3	1	
Siam:				
Bangkok.....	Mar. 30-Apr. 5.....	2		
Spain:				
Valencia.....	May 4-10.....	13		
Tunis:				
Tunis.....	Apr. 29-May 5.....	1	1	
Union of South Africa:				
Cape Province.....	Apr. 6-12.....			Outbreaks.
Orange Free State.....	Apr. 6-12.....			Do.

TYPHUS FEVER.

Egypt:				
Cairo.....	Jan. 29-Feb. 4.....	1	1	
Mexico:				
Guadalajara.....	May 4-10.....		1	
Mexico.....	Apr. 13-19.....	7		
Netherlands:				
Amsterdam.....	Apr. 20-26.....	2		
Union of South Africa:				
Cape Province.....	Apr. 6-12.....			Outbreaks.
Venezuela:				
Maracaibo.....	Apr. 20-May 3.....		6	

YELLOW FEVER.

West Africa (French Dahomey):				
Porto Novo.....	May 26.....			Reported present.

Reports Received from December 29, 1923, to May 30, 1924.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Honkong.....	Nov. 18-24.....	1		
India:				
Do.....				Oct. 14-Dec. 22, 1923: Cases, 14,117; deaths, 9,148.
Bombay.....	Dec. 23-29.....	1	1	Dec. 30, 1923-Mar. 22, 1924: Cases, 17,780; deaths, 11,153
Do.....	Feb. 3-Mar. 29.....	18	18	
Calcutta.....	Nov. 11-Dec. 29.....	85	69	
Do.....	Dec. 30-Apr. 5.....	490	403	
Madras.....	Nov. 25-Dec. 29.....	15	5	
Do.....	Dec. 30-Apr. 12.....	26	12	
Rangoon.....	Nov. 11-Dec. 29.....	8	5	
Do.....	Feb. 24-Apr. 5.....	13	11	
Indo-China:				
Saigon.....	Dec. 31-Mar. 29.....	4	4	Including 100 square kilometers of surrounding country.
Philippine Islands:				
City—				
Manila.....	Feb. 3-9.....	1	1	
Province—				
Cebu.....	Mar. 2-8.....	1	1	
Siam:				
Bangkok.....	Nov. 18-Dec. 8.....	4	2	
Do.....	Dec. 31-Mar. 29.....	13	8	
Turkey:				
Constantinople.....	Dec. 2-8.....		1	

¹ From medical officers of the Public Health Service, American consuls, and other sources.

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

Reports Received from December 29, 1923, to May 30, 1924—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Azores: St. Michael Island.....	Oct. 20-Nov. 10...	9	5	At localities 3 to 9 miles from port of Ponta Delgada.
Bolivia: La Paz.....	Oct. 1-31.....		3	
Do.....	Feb. 1-Mar. 31.....		10	
Brazil: Bahia.....	Nov. 11-Dec. 22...	5	3	
Do.....	Dec. 30-Mar. 15.....	7	6	
Porto Alegre.....	Feb. 10-Apr. 5.....	3	1	
Rio de Janeiro.....	Jan. 20-26.....	1		
British East Africa: Kenya—				
Kisumu.....	Feb. 24-Mar. 8.....	1	1	
Mombasa.....	Oct. 14-20.....	1	1	Infected rats, 2. Dec. 9-15, 1923: Cases, 4; deaths, 2; removed from vessel arrived Dec. 11, 1923.
Do.....	Dec. 30-Jan. 5.....	1	1	
Nairobi.....	Nov. 1-21.....	40		In rural districts, several hundred.
Tanganyika				To Nov. 24, 1923: Cases, 39; deaths, 25.
Do.....	Jan. 27-Feb. 9.....	8	5	
Uganda.....	Aug. 1-Oct. 31.....	734	719	
Entebbe.....	Oct. 1-Dec. 31.....	251	239	
Do.....	Jan. 1-31.....	36	35	
Canary Islands: Las Palmas.....	Oct. 15-Nov. 15.....	14	14	
Santa Cruz de Tenerife.....	Feb. 19-Apr. 8.....	5		
San Juan de la Rambla.....	Dec. 11.....	1		Locality 52 km. from Tenerife. Epidemic.
Celebes Island.....	Mar. 30.....			Including Menado.
Macassar.....	Feb. 20-Mar. 8.....	11	7	
Ceylon: Colombo.....	Nov. 11-Dec. 29.....	31	21	Plague rodents, 24.
Do.....	Dec. 30-Apr. 12.....	95	87	Plague rodents, 44.
Chile: Antofagasta.....	Mar. 16-Apr. 12.....	10	1	
China: Antung.....	Mar. 31-Apr. 6.....	1		
Nanking.....	Dec. 16-29.....			Present.
Do.....	Dec. 30-Apr. 5.....			Do.
Ecuador: Eloy Alfaro.....	Mar. 16-31.....	1	1	
Guayaquil.....	Nov. 16-Dec. 31.....	45	13	Rats taken, 53,240; found infected, 133.
Do.....	Jan. 1-Apr. 30.....	112	35	Rats taken, 119,457; found infected, 520.
Jipijapa.....	Nov. 16-Dec. 15.....			Present.
Posorja.....	Apr. 1-30.....	6	1	
Quevedo.....	Jan. 1-31.....	3	2	
Quito.....	Nov. 1-30.....	11	4	
Santa Rosa.....	Feb. 16-29.....			Do.
Vino del Milagro.....	Dec. 1-15.....	1		
Egypt: City				Jan. 1-Dec. 31, 1923: Cases, 1,519; deaths, 725. Jan. 1-Mar. 27, 1924: Cases, 86; deaths, 55.
Alexandria.....	Year 1923.....	65	33	
Cairo.....	do.....	2	2	
Port Said.....	do.....	51	29	
Suez.....	do.....	46	24	
Do.....	Jan. 2-Mar. 27.....	6	3	
Province—				
Assiout.....	Year 1923.....	370	211	
Beni Souef.....	do.....	63	23	
Charkieh.....	Jan. 31-Mar. 27.....	2	2	
Dakhlieh.....	Year 1923.....	2	2	
Fayoum.....	do.....	34	9	
Do.....	Feb. 18-Mar. 27.....	2	2	
Gharbieh.....	Year 1923.....	23	9	
Girgeh.....	do.....	337	193	
Do.....	Jan. 17-Mar. 27.....	7	4	
Gizeh.....	Year 1923.....	3	4	
Kalioubiah.....	do.....	76	10	
Do.....	Jan. 6-Mar. 27.....	1		
Kena.....	Year 1923.....	50	34	
Menoufieh.....	do.....	290	96	
Do.....	Jan. 2-Mar. 27.....	56	34	
Minia.....	Year 1923.....	106	44	
Do.....	Feb. 5-Mar. 27.....	5	4	

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

Reports Received from December 29, 1923, to May 30, 1924—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Greece:				
Kalamata.....	Apr. 18-24.....			Several deaths.
Patras.....	do.....			Do.
Hawaii:				
Honokaa.....				Jan. 8-Mar. 14, 1924: Four plague-infected rodents.
Paauhau.....				Dec. 14, 1923: One plague rat. Feb. 14, 1924: One plague rat.
India:				Oct. 14-Dec. 29, 1923: Cases, 34,542; deaths, 23,778.
Do.....				Dec. 30, 1923-Mar. 22, 1924: Cases, 93,096; deaths, 71,174. Corrected report.
Bombay.....	Oct. 28-Dec. 22.....	5	5	
Do.....	Dec. 30-Apr. 5.....	246	194	
Calcutta.....	Dec. 23-29.....	1	1	
Do.....	Jan. 6-Apr. 5.....	8	7	
Karachi.....	Nov. 11-Dec. 29.....	42	33	
Do.....	Dec. 30-Apr. 17.....	58	44	
Madras Presidency.....	Nov. 4-Dec. 29.....	1,657	1,021	
Do.....	Jan. 27-Apr. 5.....	642	417	
Rangoon.....	Jan. 27-Feb. 16.....	20	15	
Do.....	Dec. 30-Apr. 5.....	142	132	
Indo-China:				
Saigon.....	Oct. 28-Dec. 8.....	19	6	Including 100 square kilometers of surrounding country.
Do.....	Jan. 27-Apr. 5.....	2	1	One plague rodent.
Iraq:				
Bagdad.....	Nov. 11-Dec. 29.....	8	6	
Do.....	Jan. 6-Apr. 5.....	55	29	Corrected report.
Java:				Oct. 1-Dec. 31, 1923: Deaths, 2,908. Jan. 1-Feb. 29: Deaths, 1,732.
East Java—				
Djokjakarta.....	Oct. 1-Dec. 31.....		146	
Do.....	Jan. 1-Feb. 29.....		92	
Kedoe.....	Oct. 1-Dec. 31.....		1,287	
Do.....	Jan. 1-Feb. 29.....		626	
Paseroean.....	Feb. 1-29.....		3	
Pekalongan.....	Oct. 1-Dec. 31.....		150	
Do.....	Jan. 1-Feb. 29.....		107	
Samarang.....	Oct. 1-Dec. 31.....		430	
Do.....	Jan. 1-Feb. 29.....		183	
Soerabaya.....	Oct. 1-Dec. 31.....		9	
Do.....	Jan. 1-Feb. 29.....		17	Plague rats, 5.
Soerakarta.....	Oct. 1-Dec. 31.....		886	
Do.....	Jan. 1-Feb. 29.....		704	Corrected report.
Madagascar:				
Tananarive Province.....	Oct. 1-Dec. 31.....	324	272	Bubonic, pneumonic, septemic. July 1-Dec. 31, 1923—city and Province: Cases, 429; deaths, 367. Jan. 1-Feb. 29, 1924—city and Province: Cases, 525; deaths, 465.
Ambatondrazaka.....	Feb. 1-15.....	8		District. Type, pneumonic.
Ambositra.....	Feb. 1-29.....	8	1	Do.
Other localities.....	do.....	229	214	
Tananarive town.....	Oct. 1-Dec. 31.....	74	74	
Do.....	Jan. 29-Feb. 29.....	27	26	
Paraguay:				
Asuncion.....	Dec. 18.....	6	4	
Peru:				Nov. 1-Dec. 31, 1923: Cases, 38; deaths, 24. Jan. 1-Mar. 31, 1924: Cases, 162, deaths, 49.
Locality—				
Ayabaca.....	Mar. 1-31.....	4		
Barranco.....	do.....	1		
Callao.....	Jan. 1-Mar. 31.....	7	2	
Cañete.....	Nov. 1-30.....	1	1	
Do.....	Feb. 1-Mar. 31.....	14	5	
Casma.....	Mar. 1-31.....	2	1	
Chancay.....	Dec. 1-31.....	2		
Chepen.....	Nov. 1-30.....	1		
Chiclayo.....	Nov. 1-Dec. 31.....	2	1	
Chilca.....	Jan. 1-31.....	1		
Guadalupe.....	Feb. 1-Mar. 31.....	3	1	
Huacho.....	do.....	5	3	
Huairal.....	do.....	11	4	
Huarmey.....	Jan. 1-Mar. 31.....	22	4	
Lambayeque.....	Mar. 1-31.....	2		
Lima (city).....	Nov. 1-Dec. 31.....	22	15	
Do.....	Jan. 1-Mar. 31.....	41	21	

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

Reports Received from December 29, 1923, to May 30, 1924—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru—Continued.				
Locality—Continued.				
Lima (country)	Nov. 1–Dec. 31	8	7	
Do	Jan. 1–Mar. 31	11	2	
Lurin	do	2		
Mollendo	do	3	2	
Moro	Mar. 1–31	7		
Paita (city)	Jan. 1–Mar. 31	1	1	
Paita (country)	do	8	1	
Reque	do	4		
Salaverry	Mar. 1–31	1		
Sullana	Jan. 1–Mar. 31	2		
Trujillo	do	12	2	Country.
Portugal:				
Lisbon	Dec. 13–21	7		
Do	Dec. 31–Jan. 6		1	
Portuguese West Africa:				
Angola—				
Loanda	Oct. 1–Dec. 29	59	29	
Do	Dec. 30–Feb. 2		4	
Russia:				
Bukeeve Province				
				Oct. 1, 1923–Mar. 10, 1924: Cases, 339; deaths, 315; 66 plague centers; entire southeast section, cases, 473; deaths, 435.
Ural Provinces.				
Kalmuk district	Mar. 10	3		Oct. 1, 1923–Feb. 4, 1924: Cases, 441; 4 plague centers.
Novy Kazanha	Mar. 1		4	At a locality on the coast; 16 cases, 8 deaths.
Siam:				
Bangkok	Nov. 4–Dec. 8	3	2	
Do	Jan. 13–Mar. 22	5	5	
Siberia:				
Transbaikalia—				
Chita	Jan. 27	2	2	Pneumonic. Occurring in workers in veterinary laboratory.
Spain:				
Malaga	Dec. 1–31	4		
Straits Settlements:				
Penang	Jan. 27–Feb. 2	1	1	
Singapore	Nov. 11–Mar. 15	4	4	
Do	Dec. 30–Apr. 5	15	12	
Syria:				
Beirut	Nov. 1–Dec. 10	3		
Do	Jan. 1–Mar. 31	3		
Turkey:				
Constantinople	Dec. 2–22	6	3	
Union of South Africa				
Cape Province				
Uitenhage district	Dec. 9–15			Dec. 16, 1923–Apr. 5, 1924: Cases, 266; deaths, 159 (white, cases, 41; deaths, 20). Reported Mar. 17, 1924: Cases, 11; deaths, 7. Plague rodent found in vicinity Haarhoff's Kraal farm.
Orange Free State				
Thaba 'Ncho				Jan. 6–Mar. 8, 1924: Cases, 132; deaths, 69. Mar. 23–29, 1924: One plague rat.
Hoopstad district	Feb. 3–9	1		
Kroonstad district	Dec. 16–27	7	3	
Do	Jan. 6–Feb. 9	43	20	
Winburg district	Feb. 3–9	1		
Wonderfontein farm	Dec. 2–8	4		Vicinity of Hoopstad. At Hoopstad, Dec. 9–15, 1923, one death of case previously reported.
Transvaal—				
Wolmaransstad district	Mar. 2–8	3	1	White, one case. Apr. 2, 1924: Reported present in one locality.
West Africa				
On vessels:				
_____	Dec. 11	4	2	At Mombasa, British East Africa.
_____	Jan. 24	2		At Varna, Bulgaria, from Syrian port.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.
Reports Received from December 29, 1923, to May 30, 1924—Continued.
SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Algiers.....	Nov. 1-30.....	1		
Do.....	Mar. 1-31.....	1		
Arabia:				
Aden.....	Dec. 16-22.....	1		Imported. Four imported.
Do.....	Jan. 13-Apr. 19.....	8		
Belgium:				
Brussels.....	Jan. 13-Mar. 29.....	10		
Bolivia:				
La Paz.....	Oct. 1-Dec. 31.....	45	15	
Do.....	Jan. 1-Mar. 31.....	35	19	
Brazil:				
Bahia.....	Jan. 6-12.....	2		
Pernambuco.....	Nov. 4-Dec. 1.....	15	3	
Do.....	Jan. 6-Feb. 23.....		8	
Porto Alegre.....	Dec. 23-29.....		1	
Do.....	Dec. 30-Apr. 12.....		3	
Rio de Janeiro.....	Nov. 18-24.....	3	4	
Do.....	Jan. 6-Apr. 12.....	5	2	
Sao Paulo.....	Sept. 3-9.....	1		
British East Africa:				
Tanganyika Territory.....	Sept. 30-Dec. 29.....	30	7	Sept. 1-30, 1923: In areas 27 miles from town of Zanzibar. Oct. 1-31, 1923: In vicinity, 1 case, 1 death. In Mikotoni district, 30 cases, 14 deaths reported.
Do.....	Jan. 6-12.....	2		
Uganda.....	Sept. 1-30.....	6	1	
Entebbe.....	Oct. 1-Dec. 31.....	5	1	
Zanzibar.....	Sept. 1-Oct. 31.....	116	18	
British South Africa:				
Northern Rhodesia.....				Dec. 4-31, 1923: Cases, 40; deaths, 5.
Do.....	Feb. 26-Mar. 31.....	2		Jan. 1-31, 1924: Cases, 50; deaths, 11; reported from Balorale, Kalabo, and Mankoya districts.
Canada:				
Alberta—				
Calgary.....	Jan. 27-May 10.....	44		
British Columbia—				
Vancouver.....	Dec. 22-29.....	10		
Do.....	Dec. 30-May 10.....	96		
Victoria.....	Feb. 10-Mar. 29.....	3		
Manitoba—				
Winnipeg.....	Nov. 25-Dec. 29.....	21		
Do.....	Dec. 30-May 3.....	81		
New Brunswick—				
Frederickton.....				Feb. 1-29, 1924: Cases, 8.
Gloucester County.....	Mar. 2-Apr. 5.....	4		
Madawaska County.....	Dec. 8-15.....	1		
Restigouche County.....	Apr. 20-26.....	1		Jan. 1-Mar. 31, 1924: Cases, 5.
Victoria County.....	Feb. 10-16.....	2		
Westmoreland County.....	Feb. 10-Apr. 26.....	5		
Ontario.....				
Amherstburg.....	Mar. 1-31.....	16	8	Jan. 1-Apr. 30, 1924: Cases, 397; deaths, 31.
Chapleau.....	do.....	13	1	
Cochrane.....	do.....	15	5	
Essex Border.....	do.....	12	6	
Fort William and Port Arthur.....	Dec. 16-29.....	3		Occurring at Fort William.
London.....	Feb. 3-Apr. 5.....	9		
North Bay.....	do.....	1		
Perth.....	Mar. 1-31.....	14		
Toronto.....	Jan. 17-Mar. 31.....	15		
Ottawa.....	Feb. 17-May 10.....	10	1	
Windsor.....	Feb. 1-Mar. 15.....	52	11	
Quebec—				
Montreal.....	Nov. 30-Feb. 23.....	7		
Saskatchewan—				
Regina.....	Dec. 9-15.....	1		
Do.....	Dec. 30-Feb. 23.....	6	1	
Ceylon:				
Colombo.....	Nov. 11-17.....	3	1	
Do.....	Jan. 20-Apr. 12.....	6	1	

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

Reports Received from December 29, 1923, to May 30, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Chile:				
Antofagasta	Jan. 6-Apr. 12	6	1	
Concepcion	Oct. 1-Dec. 31		14	
Talcahuano	Nov. 29-Dec. 2	3		Dec. 22, 1923: Five cases present.
Valparaiso	Dec. 9-15		1	
Do.	Jan. 13-Mar. 15		8	
China:				
Amoy	Nov. 18-Dec. 8		11	
Do.	Jan. 6-Apr. 5		14	Including Kulangsu, 14 deaths; and in hospital, Feb. 9, 1924, more than 30 cases stated to be present.
Antung	Dec. 31-Apr. 6	3	2	Present.
Canton	Dec. 23-Feb. 23			Present and endemic.
Chungking	Nov. 4-Dec. 29			Stated to be widespread.
Do.	Dec. 30-Apr. 5			Present.
Foochow	Nov. 4-Dec. 15			Do.
Do.	Dec. 31-Apr. 5			
Hongkong	Oct. 28-Dec. 29	769	680	
Do.	Dec. 30-Mar. 22	590	601	
Manchuria—				
Dairen	Dec. 31-Jan. 20	2		
Do.	Mar. 3-Apr. 20	4	1	
Harbin	Nov. 12-Dec. 22	36		
Do.	Jan. 1-Mar. 17	19	5	
Nanking	Dec. 2-15			Do.
Do.	Dec. 30-Apr. 19			Do.
Shanghai	Dec. 29			Prevalent.
Do.	Jan. 6-Apr. 19	31	77	Cases, foreign; deaths, Chinese and foreign.
Tientsin	Mar. 23-29	2		Reported by mission and British municipality.
Chosen (Korea):				
Chemulpo	Jan. 1-31	1		
Seoul	Nov. 1-30	1		
Do.	Feb. 1-Mar. 31	5		
Colombia:				
Barranquilla	Apr. 6-12		2	
Buenaventura	Nov. 18-Dec. 15	8		
Do.	Apr. 3-12	3		
Costa Rica:				
Port Limon	Feb. 18-Apr. 5	2		
Czechoslovakia:				
				Oct. 1-Dec. 31, 1923: Cases, 1; deaths, 1 occurring in Slovakia.
Dominican Republic:				
La Romana	Jan. 27-Mar. 22	14		
Ecuador:				
Esmeraldas	Nov. 16-30	4		
Guayaquil	Dec. 1-31	1		
Do.	Jan. 1-Feb. 29	3		
Milagro	Apr. 1-15	1		
Quito	Nov. 1-30	167	26	
Egypt:				
Alexandria	Feb. 27-Apr. 15	4	7	
Cairo	Jan. 1-7	1	1	
Port Said	Nov. 24-Dec. 2	1		
Estonia:				
				Nov. 1-Dec. 31, 1923: Cases, 38. Jan. 1-Feb. 29, 1924: Cases, 14.
France:				
Cherbourg	Feb. 9-15	1		British seaman.
Gibraltar	Mar. 3-Apr. 13	2		
Great Britain:				
Liverpool	Mar. 2-8	1		In family of seaman recently returned from Oporto, Portugal.
Greece:				
Saloniki	Oct. 22-Dec. 30		11	
Do.	Dec. 31-Mar. 23	23	10	
Guadeloupe (West Indies):				
Abymes	Feb. 16			Jan. 2-16, 1924: Present. Present. Vicinity of Point à Pitre.
Basse Terre	Dec. 18			Present.
Do.	Jan. 12-Feb. 16			Do.
Marie Galante Island	Dec. 18			Off shore island: Present.
Do.	Feb. 16			Present. Estimated 60 cases.
Moule	Jan. 12-Feb. 16			Present.
Point à Pitre	Dec. 18			Present in vicinity.

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

Reports Received from December 29, 1923, to May 30, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Haiti:				
Cape Haitien.....	Feb. 3-Apr. 26.....	4		Mar. 9-15, 1924: Two cases in hospital.
Hinche.....	Feb. 10-16.....	1		
Port au Prince.....	Feb. 17-Mar. 1.....	2	1	
India.....				Developed at Limbe, Haiti.
Do.....				Oct. 14-Dec. 29, 1923: Cases, 9,720; deaths, 2,241.
Bombay.....	Oct. 28-Dec. 29.....	55	25	Dec. 30 1923-Mar. 22, 1924: Cases, 29,145; deaths, 5,917.
Do.....	Dec. 30-Apr. 5.....	922	459	
Calcutta.....	Dec. 16-29.....	4	4	
Do.....	Dec. 30-Apr. 5.....	18	16	
Karachi.....	Dec. 30-Apr. 17.....	129	47	
Madras.....	Nov. 4-Dec. 29.....	23	3	
Do.....	Dec. 30-Apr. 12.....	290	21	
Rangoon.....	Nov. 4-Dec. 29.....	12	4	
Do.....	Dec. 30-Apr. 5.....	53	21	
Indo-China:				
City—				
Saigon.....	Nov. 4-Dec. 29.....	133	74	Including 100 square kilometers of surrounding country.
Do.....	Dec. 31-Apr. 5.....	733	411	
Iraq:				
Bagdad.....	Oct. 24-Dec. 29.....	46	28	
Do.....	Dec. 30-Feb. 16.....	44	33	
Italy:				
Treviso.....	Apr. 1-15.....	15		Estimated.
Trieste.....	Feb. 17-23.....	4		
Turin.....	Feb. 18-24.....	1		
Jamaica:				
Do.....				Nov. 25-Dec. 29, 1923: Cases, 115.
Kingston.....	Nov. 25-Dec. 29.....	3		Dec. 30, 1923-Apr. 26, 1924: Cases 418. Reported as alastrim. Delayed report for Feb. 17-23, 1924, 1 case.
Do.....	Dec. 30-Apr. 26.....	17		
Japan:				
Kobe.....	Feb. 14-Apr. 17.....	16	7	
Nagoya.....	Apr. 6-12.....	3	1	
Taiwan.....	Jan. 1-Mar. 31.....	8		
Tokyo.....	Jan. 1-Apr. 12.....	136		
Yokohama.....	Mar. 30-Apr. 6.....	1		
Java:				
East Java—				
Batjiram.....	Mar. 8.....			Epidemic.
Soerabaya.....	Oct. 23-Dec. 29.....	348	60	
Do.....	Dec. 30-Mar. 15.....	213	40	
West Java—				
Batavia.....	Oct. 27-Dec. 28.....	65	13	
Do.....	Dec. 29-Apr. 4.....	48	8	
Latvia.....				Oct. 1-Dec. 31, 1923: Cases, 6; Jan. 1-Feb. 29, 1924; Cases, 5.
Malta.....	Feb. 1-29.....	1		
Mexico:				
Guadalajara.....	Jan. 27-Mar. 31.....	5	7	
Manzanillo.....	Dec. 4-10.....	5	1	
Mazatlan.....	Mar. 31-Apr. 13.....		4	Apr. 21, 1924: Cases from 25-35. In city and vicinity. No mortality reported.
Mexico City.....	Nov. 25-Dec. 29.....	32		Including municipalities in Federal District.
Do.....	Dec. 30-Apr. 12.....	140	23	
Monterey.....				Mar. 24, 1924, 11 cases officially announced.
Salina Cruz.....	Jan. 1-Apr. 12.....	2	1	Nine cases chicken pox present.
San Luis Potosi.....	Mar. 16-22.....		1	
Tampico.....	Jan. 21-May 10.....	45	3	From Irapuato, 9; La Barra, 1. Jan. 21-Apr. 10, 1924: Cases, 36 (12 in soldiers or soldiers' families); deaths, 5.
Vera Cruz.....	Nov. 3-Dec. 30.....		4	
Do.....	Jan. 6-Apr. 20.....	2	7	
Netherlands:				
Rotterdam.....	Jan. 20-26.....	3		
Palestine:				
Jaffa.....	Jan. 15-28.....	3		
Jerusalem.....	Feb. 18-25.....	1		
Persia:				
Teheran.....	Sept. 24-Dec. 23.....		4	
Do.....	Dec. 22-Jan. 31.....		2	
Poland.....				Sept. 23-Dec. 31, 1923: Cases, 83; deaths, 20. Jan. 1-Feb. 9, 1924: Cases, 275; deaths, 27.

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

Reports Received from December 29, 1923, to May 30, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Portugal:				
Lisbon.....	Nov. 11-Dec. 29...	19	10	Corrected report.
Do.....	Dec. 31-Apr. 13...	98	19	
Oporto.....	Nov. 25-Dec. 29...	39	23	
Do.....	Dec. 30-Apr. 26...	105	57	
Portuguese East Africa:				
Lourenco Marques.....	Dec. 30-Jan. 5.....	2		
Portuguese West Africa:				
Angola—				
Loanda.....	Dec. 2-29.....		5	
Russia:				
Ukraine.....				Aug. 1-Sept. 30, 1923: Cases, 143.
Siam:				
Bangkok.....	Oct. 23-Dec. 8.....	33	18	Nov. 25-Dec. 1, 1923; Epidemic.
Do.....	Dec. 30-Mar. 29.....	10	2	
Siberia:				
Dauria Station.....	Oct. 21.....			Present. Locality on Chita Railway, Manchurian frontier.
Sierra Leone:				
Sherbro District—				
Tagbail.....	Nov. 1-15.....	3		
Spain:				
Barcelona.....	Nov. 15-Dec. 26.....		2	
Do.....	Jan. 3-Mar. 26.....		6	
Cadiz.....	Mar. 1-31.....	2		
Valencia.....	Nov. 25-Dec. 29.....	152	12	
Do.....	Dec. 30-May 3.....	428	37	
Straits Settlements:				
Penang.....	Mar. 16-29.....	2	2	
Singapore.....	Dec. 16-29.....	2	1	
Do.....	Dec. 30-Mar. 29.....	5		
Switzerland:				
Basel.....	Jan. 27-Feb. 9.....	4		Corrected.
Berne.....	Nov. 17-Dec. 22.....	15		
Do.....	Jan. 6-Apr. 26.....	38	1	
Lucerne.....	Nov. 1-Dec. 31.....	60		
Do.....	Jan. 1-Mar. 31.....	29		
Zurich.....	Jan. 27-Mar. 8.....	2		
Syria:				
Aleppo.....	Nov. 25-Dec. 1.....	1		In vicinity, at Djsr Choughour.
Beirut.....	Jan. 21-Feb. 20.....	2		
Damascus.....	Nov. 16-Dec. 15.....	7		
Do.....	Jan. 29-Apr. 12.....	38		
Tunis:				
Tunis.....	Oct. 27-Nov. 2.....	5	1	
Do.....	Jan. 8-Apr. 28.....	10	5	
Turkey:				
Constantinople.....	Nov. 11-Dec. 8.....	3		Dec. 1-31, 1923: Cases, 120; deaths, 15.
Do.....	Jan. 6-Apr. 5.....	4	1	
Union of South Africa:				
Cape Province.....	Oct. 28-Dec. 8.....			Oct. 1-31, 1923: Colored, cases, 41; deaths, 2; white, cases, 3 Feb. 1-29, 1924: Cases, 71 (white, 6); 1 death. Outbreaks.
Do.....	Jan. 20-Mar. 22.....			
Natal.....	Oct. 28-Nov. 3.....			
Do.....	Mar. 16-22.....			
Orange Free State.....	Oct. 28-Nov. 24.....			
Do.....	Jan. 20-Mar. 29.....			
Transvaal.....	Nov. 18-Dec. 1.....			
Do.....	Mar. 11-17.....			
Johannesburg.....	Nov. 25-Dec. 15.....	3		
Do.....	Feb. 3-23.....	2		
Uruguay:				
Montevideo.....	Oct. 1-31.....	1		
Venezuela:				
Caracas.....	Jan. 22.....			Epidemic.
Margarita Island—				
Punta Piedra.....	Mar. 21.....	60		20 miles from mainland.
On vessels:				
Steamship Coppename.....	Mar. 19.....	1		At New Orleans from Puerto Barrios, Guatemala.
U. S. Naval Hospital ship Mercy.....	Apr. 1.....	1		At St. Thomas, Virgin Islands, from Culebra, P. I. Patient had been in Jamaica, W. I., two weeks previous. Case reported as alastrim.

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

Reports Received from December 29, 1923, to May 30, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
On vessels—Continued.				
S. S. Nitokris.....	Apr. 30.....	1		At Guayaquil, from Valparaiso, Chile. Under treatment at lazaretto.
S. S. Torres.....	Jan. 14.....	1		At New Orleans quarantine station from Tampico, Mexico, via ports. Case in seaman signed on at Galveston, Tex., on outward voyage.
S. S. Tupper.....	Jan. 20-26.....	1		At Gonaives, Haiti.
S. S. Vasari.....	Dec. 31.....	1		At Trinidad, West Indies, from Buenos Aires, Argentina. Vessel left Buenos Aires Dec. 15, 1923, for New York, via Santos, Rio de Janeiro, Trinidad, Barbados.
Sch. Annie M. Parker.....	Jan. 23.....	3		At sea. Vessel abandoned and crew removed to vessel bound for Rotterdam. Patients removed at Liverpool Feb. 28, bound for Newfoundland.

TYPHUS FEVER.

Algeria:				
Algiers.....	Nov. 1-Dec. 31.....	7	3	
Do.....	Jan. 1-Mar. 31.....	21	7	
Bolivia:				
La Paz.....	Oct. 1-Dec. 31.....	43	5	
Do.....	Jan. 1-Mar. 31.....	31	3	
Brazil:				
Porto Alegre.....	Feb. 24-Mar. 1.....		1	
Bulgaria:				
Sofia.....				Nov. 18-Dec. 15, 1923: Paratyphus fever, cases, 17. Jan. 6-Mar. 29, 1924: Paratyphus fever, cases, 9.
Canary Islands:				
Santa Cruz de Tenerife.....	Jan. 14-Feb. 17.....		2	
Ceylon:				
Colombo.....	Feb. 24-Mar. 1.....	1	1	Case from port, 1.
Chile:				
Antofagasta.....	Dec. 2-8.....	4		
Do.....	Apr. 6-12.....	2		
Concepcion.....	Oct. 1-Nov. 30.....	4		Dec. 11-24, 1923: Deaths, 3.
Do.....	Jan. 8-Apr. 21.....	2	13	In district, at 12 localities, 92 cases.
Iquique.....	Jan. 20-26.....		1	
Talcahuano.....				Dec. 5, 1923: 3 cases under treatment. Jan. 12, 1924: 1 case under treatment.
Do.....	Jan. 31-Apr. 26.....	6	2	
Valparaiso.....	Nov. 25-Dec. 15.....		29	Dec. 24, 1923: In hospital, 34 cases.
Do.....	Dec. 30-Mar. 15.....		44	Reports from two districts of the Province of Valparaiso.
China:				
Antung.....	Nov. 12-Dec. 30.....	5		
Chungking.....	Nov. 18-24.....			Present.
Do.....	Dec. 16-29.....			Endemic.
Do.....	Dec. 30-Feb. 16.....			Do.
Manchuria—				
Harbin.....	Mar. 18-24.....		1	
Chosen (Korea):				
Chemulpo.....	Feb. 1-Mar. 31.....	5	3	
Seoul.....	do.....	86	7	
Czechoslovakia:				
Danzig-Polish frontier:				Oct.-Dec., 1923: Cases, 21.
Mühlbanz.....	Mar. 6.....			Present: Origin stated to be focus at Mallinia.
Ecuador:				
Quito.....	Nov. 1-30.....	14	1	
Egypt:				
Alexandria.....	Nov. 19-Dec. 23.....	3		
Do.....	Jan. 8-Apr. 1.....	7		
Cairo.....	Sept. 10-Dec. 31.....	39	11	
Do.....	Jan. 8-28.....	4	2	

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

Reports Received from December 29, 1923, to May 30, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Estonia.....				Nov. 1-30, 1923: Paratyphus fever, cases, 8. Dec. 1-31, 1923: Typhus fever, cases, 15; paratyphus fever, cases, 4. January, 1924: Paratyphus fever, cases, 6
Finland.....				Dec. 1-15, 1923: Paratyphus fever cases, 15. Feb. 15-Mar. 31, 1924: Paratyphus fever, cases, 12.
Germany: Coblentz.....	Jan. 27-Feb. 2.....	1		
Greece: Athens.....	Jan. 11-Feb. 20.....		7	
Saloniki.....	Nov. 26-Dec. 30.....	7	3	
Hungary: Budapest.....	Jan. 27-Apr. 19.....	35	13	July 1-Aug. 31, 1923: Cases, 24.
Java: East Java— Soerabaya.....	Dec. 9-29.....	12		
Do.....	Dec. 30-Jan. 5.....	2		
Latvia.....				Oct. 1-Dec. 31, 1923: Cases, 22; paratyphus fever, 12; recurrent typhus, 3. Jan. 1-Feb. 29, 1924: Cases, 48. Paratyphus, A, 1; B, 1. Recurrent, 1 case. Year, 1923: Cases, 819; deaths, 86; recurrent typhus, 13 cases. Feb. 1-29, 1924: Cases, 51; deaths, 9.
Liban.....	Apr. 8-15.....	4		
Lithuania.....				
Mexico: Durango.....	Dec. 1-31.....		2	
Do.....	Jan. 1-Feb. 29.....		3	
Guadalajara.....	Jan. 27-May 3.....	5	8	Feb. 1-29, 1924: Cases, 2; deaths, 1.
Mexico City.....	Nov. 25-Dec. 29.....	86		Including municipalities in Federal District
Do.....	Dec. 30-Apr. 12.....	83	8	Do.
San Luis Potosi.....	Jan. 17-23.....	1	1	
Torreón.....	Feb. 1-Mar. 31.....		6	
Netherlands: Amsterdam.....	Mar. 2-8.....	2		
Norway: Stavanger.....	Dec. 25-31.....	1		
Palestine: Jaffa.....	Jan. 1-Apr. 15.....	7		
Jerusalem.....	Feb. 19-28.....	2		
Persia: Teheran.....	Sept. 24-Oct. 23.....		1	
Poland.....				Sept. 23-Dec. 31, 1923: Cases, 947; deaths, 92; recurrent typhus, cases, 67; deaths, 1. Jan. 1-Feb. 9, 1924: Cases, 1,232; deaths, 102. Recurrent cases, 63. Jan. 6-Feb. 2, 1924: Cases, 341; deaths, 26. Recurrent fever, cases, 27.
Pomerellen.....	Jan. 8-Mar. 25.....	17	4	Locality on Danzig-Polish frontier.
Portugal: Oporto.....	Jan. 27-Feb. 2.....	2		
Rumania: Kishineff District.....	Nov. 1-Dec. 31.....	15		
Russia: Karelian Republic.....	Mar. 12.....			Prevalent.
Novo Cherkarsk.....	do.....			Do.
Rostov-on-Don.....	do.....			Do.
Saratov.....	do.....			Do.
Ukraine.....				Aug. 1-Sept. 30, 1923: Cases, 768. Recurrent typhus: Aug. 1-Sept. 30, 1923: Cases, 2,307. Reported present in various sections, Mar. 12, 1924.
Siberia: Vladivostok.....	Feb. 19.....			Present and verging on epidemic prevalence.

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

Reports Received from December 29, 1923, to May 30, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Spain:				
Barcelona.....	Nov. 29-Dec. 12.....		2	
Do.....	Jan. 3-Apr. 2.....		6	
Madrid.....	Dec. 1-31.....		7	
Do.....	Jan. 1-31.....		2	
Syria:				
Damascus.....	Jan. 27-Feb. 2.....	1		
Tunis:				
Tunis.....	Feb. 5-11.....	1		
Turkey:				
Constantinople.....	Nov. 11-Dec. 29.....	15	1	Dec. 1-31, 1923: Cases, 41; deaths, 5.
Do.....	Dec. 30-Apr. 5.....	11		
Union of South Africa.....				Oct. 1-31, 1923: Colored, 287 cases, 58 deaths; white, 2 cases; total, 289 cases, 58 deaths. Jan. 1-Feb. 29, 1924: Cases, 411; deaths, 25 (colored). Among white population, 7 cases. Total cases, 414; deaths, 75.
Cape Province.....				Oct. 1-31, 1923: Colored, cases, 245; deaths, 47.
Do.....				Jan. 1-Feb. 29, 1924: Cases, 168; deaths, 26. Feb. 24-Mar. 17, 1924: Outbreaks.
Natal.....				Oct. 1-31, 1923: Colored, cases, 4; deaths, 3.
Do.....				Jan. 1-Feb. 29, 1924: Cases, 90; deaths, 14. Feb. 24-Mar. 1, 1924: Outbreaks.
Durban.....	Nov. 24-Dec. 1.....	73		Cases occurring among native stevedores in the harbor area of the port and confined to one barracks.
Orange Free State.....				Oct. 1-31, 1923: Colored, cases, 25; deaths, 8. Feb. 24-Mar. 1, 1924: Outbreaks.
Do.....				Jan. 1-Feb. 29, 1924: Cases, 59; deaths, 10. Mar. 23-Apr. 5; Outbreaks.
Kroonstad District.....	Jan. 20-26.....			Outbreaks on two farms.
Transvaal.....				Oct. 1-31, 1923: Colored, cases, 13.
Do.....				Jan. 1-Feb. 29, 1924: Cases, 90; deaths, 26.
Johannesburg.....	Oct. 1-Dec. 31.....	3	4	
Do.....	Jan. 6-Mar. 29.....	8		
Potschefstrom District.....	Jan. 20-26.....			Outbreaks on seven farms.
Venezuela:				
Maracaibo.....	Dec. 16-22.....		1	
Do.....	Feb. 17-Mar. 1.....		2	
Yugoslavia:				
Croatia—				
Zagreb.....	Dec. 2-15.....	3		
Do.....	Feb. 17-23.....	1		
Serbia—				
Belgrade.....	Nov. 25-Dec. 1.....	1		
On vessel:				
S. S. Malta Maru.....	Mar. 17.....	1		At Rotterdam, Netherlands, from South America.

YELLOW FEVER,

Brazil:				
Pernambuco City.....	Nov. 16.....	3	2	