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PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

July 17–August 13, 1938

The accompanying table summarizes the prevalence of eight important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State are published in the Public Health Reports under the section "Prevalence of disease." The table gives the number of cases of these diseases for the 4-week period ending August 13, the number reported for the corresponding period in 1937, and the median number for the years 1933–37.

DISEASES ABOVE MEDIAN PREVALENCE

Smallpox.—The smallpox incidence remained comparatively high, the number of cases (394) being the highest recorded for this period since 1931. The Atlantic Coast regions were apparently free from the disease, and the Mountain region reported a relatively low incidence, but all other regions reported a higher incidence than is normally expected at this season of the year. Of the total cases, California reported 71; Washington, 52; Indiana, 29; Iowa, 26; and Oregon, 24; more than one-half of the reported cases occurred in those 5 States.

Influenza.—The number of cases of influenza reported for the current period was 1,322, as compared with 937, 727, and 987 for the corresponding period in 1937, 1936, and 1935. Thirty cases reported from Maine were mostly responsible for a relatively high incidence in the New England region, while in the South Central regions the disease was unusually prevalent throughout the entire section; other regions reported a very favorable influenza situation.

Measles.—The number of cases of measles dropped from approximately 32,000 for the preceding 4-week period to approximately 8,600 for the 4 weeks ending August 13. The incidence was slightly above that for the corresponding period in 1937, but more than 25 percent above the figure for 1936. Compared with the average for the 5 preceding years, the number of cases for the current period represents an increase of less than 5 percent. The disease is still comparatively prevalent in the West North Central, South Atlantic, and Western regions, but in the Middle Atlantic and East North Central regions, the incidence has dropped considerably below the normal expectancy; other regions reported smaller decreases.

Number of reported cases of 8 communicable diseases in the United States during the 4-week period July 17–Aug. 13, the number for the corresponding period in 1937, and the median number of cases reported for the corresponding period 1933–37¹

Division	Current period			1937			5-year median			Current period			1937			5-year median		
	Current period	1937	5-year median	Current period	1937	5-year median	Current period	1937	5-year median	Current period	1937	5-year median	Current period	1937	5-year median			
	Diphtheria			Influenza ²			Measles ³			Meningococcus meningitis								
United States ¹	1,288	1,158	1,446	1,322	937	987	8,591	8,294	8,294	151	250	250						
New England.....	21	60	54	38	3	3	596	400	649	6	11	9						
Middle Atlantic.....	138	158	209	12	22	21	2,480	3,152	3,152	30	49	49						
East North Central.....	240	205	216	90	107	170	2,328	2,571	2,571	21	45	45						
West North Central.....	69	74	140	97	143	71	543	169	281	6	14	14						
South Atlantic.....	304	219	230	324	224	317	800	677	677	29	48	48						
East South Central.....	161	126	155	108	56	76	210	352	199	24	35	18						
West South Central.....	217	192	209	492	261	188	184	317	317	15	25	11						
Mountain.....	65	33	33	79	66	37	473	422	308	6	8	7						
Pacific.....	73	91	91	82	55	70	977	234	763	14	15	15						
	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever								
United States ¹	232	1,594	1,035	3,508	3,796	4,068	394	357	209	2,322	2,704	2,895						
New England.....	11	105	104	252	200	300	0	0	0	32	39	39						
Middle Atlantic.....	34	104	104	613	747	1,015	0	11	0	171	190	190						
East North Central.....	45	357	76	1,156	1,412	1,404	67	60	37	258	276	323						
West North Central.....	28	172	36	397	431	419	99	160	63	118	203	203						
South Atlantic.....	41	102	43	249	286	291	0	6	3	542	613	787						
East South Central.....	28	136	83	158	149	173	14	4	1	436	488	558						
West South Central.....	21	451	25	205	207	153	31	0	15	615	739	714						
Mountain.....	6	37	13	163	135	135	36	71	40	84	55	81						
Pacific.....	18	130	97	315	229	389	147	45	45	66	101	70						

¹ 48 States. Nevada is excluded and the District of Columbia is counted as a State in these reports.
² 44 States and New York City.
³ 46 States. Mississippi and Georgia are not included.

DISEASES BELOW MEDIAN PREVALENCE

Poliomyelitis.—The poliomyelitis incidence (232 cases) is the lowest recorded for this period in the 10 years for which these data are available. In 1937, 1936, and 1935 the cases for this period totaled 1,594, 515, and 1,433, respectively. An increase of this disease is normally expected at this season of the year and each section

of the country contributed to a 50-percent increase in the country as a whole over the preceding 4-week period. However, in each region, except the West North Central and South Atlantic, the number of cases was quite small as compared with those of last year and was definitely below the expected seasonal incidence.

Diphtheria.—While the number of cases (1,288) of diphtheria reported for the current period was more than 10 percent above that reported during the corresponding period in each of the two preceding years, it was about 10 percent less than the 1933–37 median figure (1,446) for this period. The South Atlantic and Mountain regions reported more cases than normally occur in those regions at this season of the year, but in other regions the incidence was either on a level with that of recent years or comparatively low.

Meningococcus meningitis.—The number of reported cases of meningitis was about 60 percent of the number reported for the corresponding period in 1937 and also of the preceding 5-year median, which is represented by the 1937 figure. The South Central regions reported a slightly larger number of cases than might be expected at this season, but in all other regions the incidence was relatively low. For the country as a whole the current incidence (151 cases) is the lowest recorded since 1934, when there were 130 cases reported for this period.

Scarlet fever.—The scarlet fever incidence was relatively low, the West South Central and Mountain regions being the only regions in which the cases exceeded the 1933–37 median for this period. For the country as a whole the number of cases (3,508) was the lowest recorded for this period in 7 years.

Typhoid fever.—The typhoid fever situation was quite favorable during the current period. The number of cases (2,322) was about 85 percent of that for the corresponding period in 1937 and about 80 percent of the preceding 5-year average incidence. With the exception of the year 1936, when approximately 2,000 cases were reported for this period, the current incidence is the lowest in the 10 years for which these data are available.

MORTALITY, ALL CAUSES

The average mortality rate from all causes in large cities for the 4 weeks ending August 13, based on data received from the Bureau of the Census, was 9.9 per 1,000 inhabitants (annual basis). The average rate for this period for the 5 preceding years is 10.5. The current rate is the lowest recorded for this period since the years 1932 and 1933 when the rates were 9.7 and 9.8, respectively.

FREQUENCY OF DISABLING ILLNESS AMONG INDUSTRIAL EMPLOYEES DURING 1932-37 AND THE FIRST QUARTER OF 1938¹

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INTRODUCTION

Quarterly and annual reports on the frequency of sickness and nonindustrial injuries causing disability for 8 consecutive calendar days or longer among a group of industrial employees, based on tabulations made from records received periodically from sick benefit organizations, have been published at intervals in the PUBLIC HEALTH REPORTS for approximately 20 consecutive years. The quarterly reports on the experience among male workers for the year 1937 have already appeared (2, 3, 4, 5). The present paper records the disabling sickness experience among both males and females for the years 1932-37, and the experience among males for the first quarter of 1938.

For the year 1937, morbidity rates based on recorded disability among a group of members of industrial sick benefit organizations in the United States do not present a picture as favorable as that shown by the mortality rates of an insured group composed almost entirely of wage-earners and their dependents (6), nor as that indicated by preliminary data from 40 States, the District of Columbia, and Hawaii (7). Since it is recognized that morbidity and mortality, respectively, yield indexes that measure different capacities, the former the capacity to remain well, and the latter the capacity merely to remain alive, the difference in the two pictures for the year 1937 is not as paradoxical as it may first appear.

YEARS 1932-37

Source of data.—Data for the individual years of the period 1932-37 are available from two different groups of sick benefit organizations, the first group comprising all organizations that reported in specific years regardless of whether they continued to report throughout the entire period, and the second group, a part of the first, comprising 25 organizations that reported continuously throughout the 6 years. Since preliminary calculations showed that corresponding rates are generally similar for both groups it was decided to consider only the first group, namely, that comprising all organizations that reported in specific years regardless of whether they continued to report throughout the 6 years.

¹ From the Division of Industrial Hygiene, National Institute of Health, Washington, D. C. For the years 1921-31, see reference (1).

The records of 29 organizations are available for the year 1937.² These organizations are located as follows: Pennsylvania, 8; Illinois, 5; Connecticut, Massachusetts, and New York, 3 each; Ohio, 2; and Canada, Maine, South Dakota, Minnesota, and New Jersey, 1 each. It is of interest to note that of the 29 organizations, 20, covering approximately 87 percent of the 217,888 male and female employees under observation in 1937, are connected with industrial establishments that have been approved by the American College of Surgeons. This means that these establishments have complied with a minimum standard for medical service in industry. The minimum standard (S) includes the following requirements:

1. The industrial establishment shall have an organized medical department or service with competent medical staff including consultants and also shall have adequate emergency, dispensary, and hospital facilities and personnel to assure efficient care of the ill and injured.

2. Membership on the medical staff shall be restricted to physicians and surgeons who are (a) graduates of an acceptable medical school, with the degree of Doctor of Medicine, in good standing and licensed to practice in their respective States or Provinces, (b) competent in the field of industrial medicine and traumatic surgery, (c) worthy in character and in matters of professional ethics; in the latter connection the practice of the division of fees, under any guise whatsoever, shall be prohibited.

3. There shall be a system of accurate and complete records filed in an accessible manner, such records to include particularly a report of injury or illness, description of physical findings, treatment, estimated period of disability, end results, as well as other information pertinent to the case or required by statute for workmen's compensation claims or other purposes.

4. Patients requiring hospitalization shall be sent to institutions approved by the American College of Surgeons.

5. The medical department or service shall have general supervision over the sanitation of the plant and the health of all employees.

Time changes in the disability rates by broad cause groups, 1932-37, inclusive.—Among other things, tables 1 and 2 show for males and females, respectively, the rates of disability associated with broad cause groups for each year from 1932 through 1937. These broad groups are nonindustrial injuries, respiratory diseases, digestive diseases, nonrespiratory-nondigestive diseases, and the totals, namely, sickness, and sickness and nonindustrial injuries. The yearly rates for these broad groups and totals, are shown graphically for males and females in figure 1. It will be observed that, with the exception of the rate for nonindustrial injuries for 1937, all of the rates for the females are consistently above the corresponding rates for the males. In fact, in the case of all sickness and nonindustrial injuries, the rates for the different years for the males vary from 54 to 66 percent of the corresponding rates for the females (table 1). With regard to the 6-year

² Previous reports based on data from a different number of organizations will show slight differences in corresponding annual rates.

trends shown by the broad cause groups, they appear to be more or less level.

TABLE 1.—Frequency of disabling cases of sickness and nonindustrial injuries lasting 8 consecutive calendar days or longer among MALE employees in various industries, by cause, and by year, 1932 to 1937, inclusive

Cause. (Numbers in parentheses are disease title numbers from the International List of the Causes of Death, fourth revision, Paris, 1929)	Annual number of cases per 1,000 males						
	1937	1932-36, inclusive ¹	1936	1935	1934	1933	1932
Sickness and nonindustrial injuries ¹	99.5	86.7	90.7	85.1	78.1	82.3	97.5
Percent of female rate.....	68	60	63	59	54	63	68
Sickness.....	87.7	74.9	79.2	73.9	65.8	71.0	84.9
Nonindustrial injuries (163-198).....	11.8	11.8	11.5	11.2	12.3	11.3	12.6
Respiratory diseases.....	40.9	30.7	33.5	29.3	24.5	28.6	37.6
Influenza and grippe (11).....	21.4	15.0	15.2	12.7	10.1	15.3	22.0
Bronchitis, acute and chronic (106).....	4.7	3.7	4.8	3.6	3.2	2.9	3.6
Diseases of the pharynx and tonsils (115a).....	5.4	4.5	4.8	5.1	4.3	3.9	4.5
Pneumonia, all forms (107-109).....	3.0	2.1	2.6	2.3	2.0	1.8	2.0
Tuberculosis of the respiratory system (23).....	.8	.9	.8	1.0	.8	.8	1.0
Other respiratory diseases (104, 105, 110-114).....	5.6	4.5	5.3	4.6	4.1	3.9	4.5
Nonrespiratory diseases.....	46.8	44.2	45.7	44.6	41.3	42.4	47.3
Digestive diseases.....	13.8	12.9	13.6	12.9	12.7	12.1	13.3
Diseases of the stomach, except cancer (117, 118).....	4.0	3.6	3.7	3.6	3.2	3.3	4.0
Diarrhea and enteritis (120).....	1.4	1.2	1.3	1.1	1.3	1.0	1.0
Appendicitis (121).....	4.4	3.7	4.1	4.0	3.9	3.3	3.4
Hernia (122a).....	1.5	1.5	1.7	1.4	1.5	1.3	1.9
Other digestive diseases (115b, 116, 122b-129).....	2.5	2.9	2.8	2.8	2.8	3.2	3.0
Nondigestive diseases.....	33.0	31.3	32.1	31.7	28.6	30.3	34.0
Diseases of the heart (90-95).....	2.5	2.3	2.3	2.4	2.0	2.1	2.5
Other circulatory diseases (96-103).....	3.0	2.8	3.1	2.8	2.5	2.7	3.0
Nephritis, acute and chronic (130-132).....	.5	.6	.4	.5	.5	.5	.8
Other genitourinary diseases (133-138).....	2.3	2.4	2.3	2.7	2.4	2.2	2.3
Neuralgia, neuritis, sciatica (37a).....	2.2	2.1	2.2	2.3	1.8	2.1	2.3
Neurasthenia and the like (part of 87b).....	1.1	1.0	1.1	1.2	.8	.8	1.3
Other diseases of the nervous system (78-85, part of 87b).....	1.0	1.3	1.1	1.3	1.4	1.4	1.2
Rheumatism, acute and chronic (56, 57).....	4.1	4.5	4.2	4.0	4.0	4.9	5.3
Diseases of the organs of locomotion, except diseases of the joints (156b).....	2.9	2.9	3.2	2.7	2.7	2.8	3.3
Diseases of the skin (151-153).....	3.1	2.7	3.0	2.7	2.5	2.7	2.7
Infectious and parasitic diseases ² (1-10, 12-22, 24-33, 36-44).....	2.7	2.5	2.3	3.0	2.5	2.0	2.7
Cancer, all sites (45-53).....	.4	.5	.4	.5	.4	.5	.6
Ill-defined and unknown causes (200).....	3.0	2.1	2.8	2.0	1.5	2.0	2.3
All other diseases (54, 55, 58-77, 88, 89, 154-156a, 157, 162).....	4.2	3.6	3.7	3.6	3.6	3.6	3.7
Number of males, all reporting organizations.....	200,967	819,464	170,680	157,959	174,643	152,203	163,979

¹ Industrial accidents, venereal diseases, and a few numerically unimportant causes of disability are not reported.

² Except influenza, respiratory tuberculosis, and the venereal diseases.

³ Average of the 5 annual rates.

Frequency of disability by broad cause groups for 1937 as compared with 1932-36.—Tables 1 and 2 also show by sex and broad cause groups the frequencies of disability for 1937 and 1932-36, respectively. These rates are presented graphically in figure 2. It will be seen that the rates for 1932-36 for the males are consistently lower than the corresponding rates for the females; the same holds for 1937 with the possible exception of the rates for nonindustrial injuries, which appear to show a slight sex difference. In comparing the rates for 1937 with those for 1932-36 it will be observed that in the instance of the males the frequencies for 1937 are generally higher than the corresponding

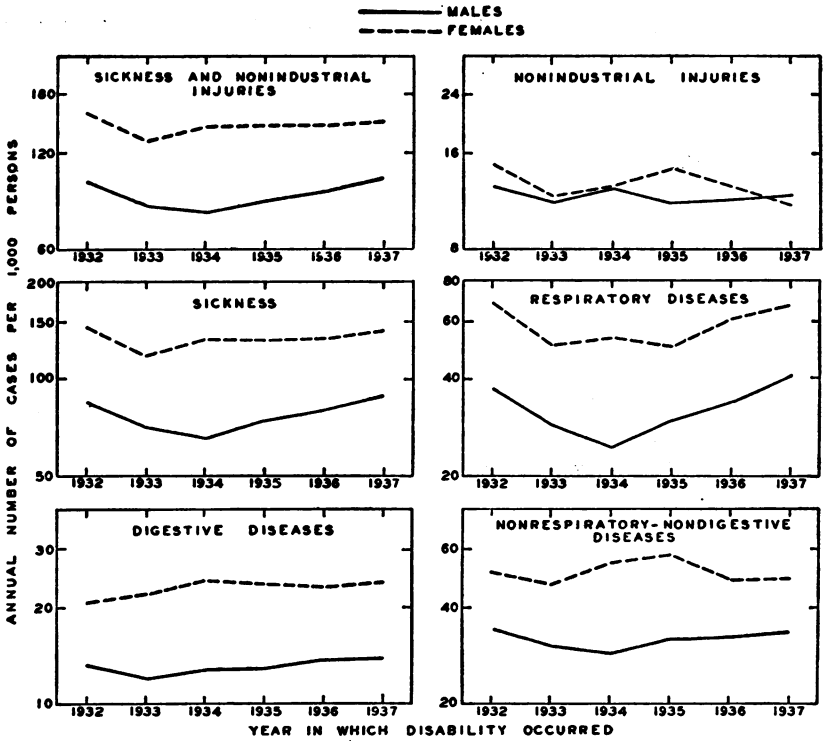


FIGURE 1.—Frequency (logarithmic) of cases of disabling sickness and nonindustrial injuries lasting 8 calendar days or longer, by broad cause groups and sex, 1932-1937. (Morbidity experience of industrial establishments which reported their cases to the U. S. Public Health Service.)

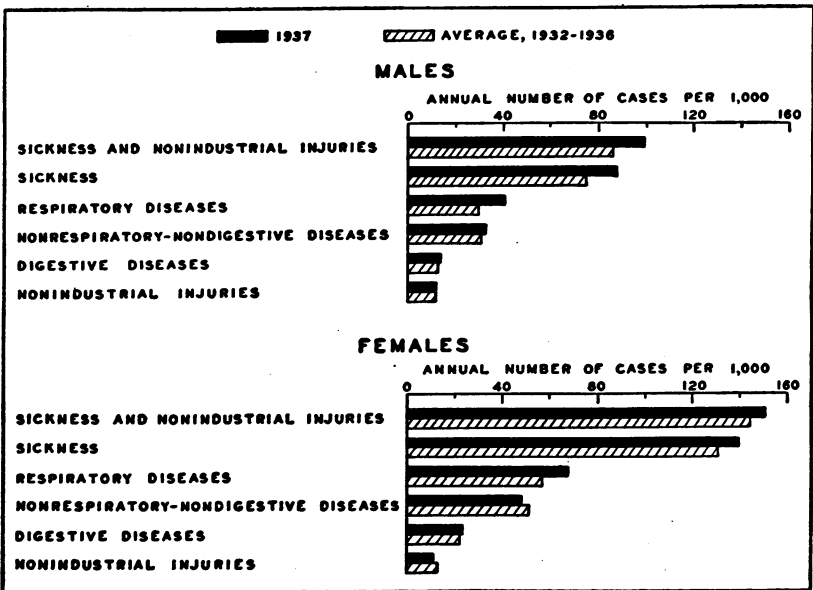


FIGURE 2.—Frequency of cases of disabling sickness and nonindustrial injuries lasting 8 calendar days or longer, by broad cause groups and sex, 1937 compared with 1932-1936, inclusive. (Morbidity experience of industrial establishments which reported their cases to the U. S. Public Health Service.)

ones for 1932-36, the excess for all sickness and nonindustrial injuries being 15 percent, and for the respiratory diseases, 33 percent. With respect to the females no excesses are shown for nonrespiratory-nondigestive diseases or for nonindustrial injuries, but there is an excess of 4.5 percent for all sickness and nonindustrial injuries, and of 18 percent for the respiratory diseases. It would thus appear that the epidemic of influenza during the early part of 1937 caused a proportionately smaller increase of absences among the females than among the males.

TABLE 2.—*Frequency of disabling cases of sickness and nonindustrial injuries lasting 8 consecutive calendar days or longer among FEMALE employees in various industries, by cause, and by year, 1932 to 1937, inclusive*

Cause. (Numbers in parentheses are disease title numbers from the International List of the Causes of Death, fourth revision, Paris, 1929)	Annual number of cases per 1,000 females						
	1937	1932-36, inclusive ^a	1936	1935	1934	1933	1932
Sickness and nonindustrial injuries ¹	151.1	144.6	144.9	144.9	143.6	131.3	158.4
<i>Percent of male rate</i>	168	167	160	170	184	160	168
Sickness.....	140.2	131.4	132.4	130.7	131.1	119.5	143.6
Nonindustrial injuries (163-198).....	10.9	13.2	12.5	14.2	12.5	11.8	14.8
Respiratory diseases.....	67.8	57.4	61.0	50.4	52.9	51.3	71.6
Influenza and grippe (11).....	33.9	28.7	27.7	22.5	22.9	28.1	42.5
Bronchitis, acute and chronic (106).....	7.6	7.3	8.4	6.3	6.9	5.8	8.9
Diseases of the pharynx and tonsils (115a).....	13.7	11.1	12.8	13.0	12.6	8.1	9.3
Pneumonia, all forms (107-109).....	1.1	1.3	1.3	1.1	1.7	1.2	1.4
Tuberculosis of the respiratory system (23).....	.6	1.1	.8	.7	1.4	1.0	1.4
Other respiratory diseases (104, 105, 110-114).....	10.9	7.9	10.0	6.8	7.4	7.1	8.1
Nonrespiratory diseases.....	72.4	74.0	71.4	80.3	78.2	68.2	72.0
Digestive diseases.....	23.7	22.5	22.9	23.5	24.1	21.7	20.5
Diseases of the stomach, except cancer (117, 118).....	2.2	3.3	2.8	3.0	3.3	3.4	4.3
Diarrhea and enteritis (120).....	2.4	2.3	2.2	3.4	2.6	2.1	1.3
Appendicitis (121).....	13.8	10.1	12.0	10.2	10.6	8.6	9.1
Hernia (122a).....	.4	.4	.4	.1	.5	.1	.4
Other digestive diseases (115b, 116, 122b-129).....	4.9	6.4	5.5	6.4	7.1	7.5	5.4
Nondigestive diseases.....	48.7	51.5	48.5	56.8	54.1	46.5	51.5
Diseases of the heart (90-95).....	1.3	1.7	1.1	1.7	2.2	2.0	1.3
Other circulatory diseases (96-103).....	3.5	2.5	2.3	2.8	2.7	2.1	2.8
Nephritis, acute and chronic (130-132).....	.2	.4	.3	.5	.1	.6	.7
Other genitourinary diseases (133-139).....	9.3	10.2	8.9	11.5	11.1	9.9	9.4
Neuralgia, neuritis, sciatica (87a).....	2.4	2.6	2.0	2.7	2.9	2.3	3.0
Neurasthenia and the like (part of 87b).....	5.4	6.1	6.5	6.7	5.6	5.1	6.4
Other diseases of the nervous system (78-85, part of 87b).....	1.0	1.1	.5	.7	2.1	1.2	1.0
Rheumatism, acute and chronic (56, 57).....	2.9	3.5	3.3	3.4	3.4	3.5	3.8
Diseases of the organs of locomotion, except diseases of the joints (156b).....	1.3	1.8	1.7	2.5	1.7	1.3	1.9
Diseases of the skin (151-153).....	3.3	3.3	3.1	3.4	4.1	2.9	3.0
Infectious and parasitic diseases ² (1-10, 12-22, 24-33, 36-44).....	3.1	3.9	2.9	5.4	3.7	2.9	4.7
Cancer, all sites (45-53).....	.3	.4	.3	.2	.7	.4	.5
Ill-defined and unknown causes (200).....	4.9	4.0	4.5	5.0	3.4	3.3	3.9
All other diseases (54, 55, 58-77, 88, 89, 154-156a, 157, 162).....	9.8	10.0	11.1	10.3	10.4	9.0	9.1
Number of females, all reporting organizations.....	16, 921	73, 981	15, 181	15, 049	15, 644	14, 587	13, 520

¹ Industrial accidents, venereal diseases, and a few numerically unimportant causes of disability are not reported.

² Except influenza, respiratory tuberculosis, and the venereal diseases.

^a Average of the 5 annual rates.

Frequency of disability by specific cause.—Tables 1 and 2 show further the frequency of disability by specific cause. Influenza and grippe, varying in the different years from 10 to 22 cases per 1,000

males, and from 23 to 43 cases per 1,000 females, ranks first with respect to frequency. The rate for 1937, 21.4 cases per 1,000 males, is approximately 43 percent greater than the average for the 5 years, the corresponding rate and percentage excess for the females being 33.9 and 18, respectively. With respect to the males the next important cause of disability is nonindustrial injuries, fluctuating irregularly between 11 and 13 cases per thousand per year during the period 1932-37. While the rates for nonindustrial injuries are similar for both sexes, this cause does not rank second among the females, diseases of the pharynx and tonsils, and appendicitis each carrying rates since 1934 similar to those for nonindustrial injuries.

In the instance of the males it is of interest to note that for causes other than influenza and grippe and nonindustrial injuries the six annual rates as well as the rates covering the 5 years are all 5.6 cases per 1,000 or less. With respect to the females, and with the exceptions as noted for the males, rates in the neighborhood of 10 cases per 1,000 are associated with a number of specific causes and small groups of specific causes, with no rate above 13.8.

With regard to the 6-year trends (1932-37) of the frequencies of the different causes there is some indication, for both sexes, of an increasing trend in diseases of the pharynx and tonsils, diarrhea and enteritis, appendicitis, bronchitis (males only), pneumonia (males only), and diseases of the skin (males only), while decreasing trends are suggested in pneumonia (females only), tuberculosis of the respiratory system, diseases of the stomach except cancer (females only), rheumatism, and cancer.

Percentage distribution of the total number of disabling cases by specific cause.—A percentage distribution of the number of disabling cases among industrial workers generally discloses a large percentage of cases attributable to a relatively small group of causes (table 3). Thus of the actual number of recorded disabling cases among the males, influenza and grippe and nonindustrial injuries account for 33.4 percent of all cases occurring in 1937, and 30.9 percent of those occurring in 1932-36; the corresponding percentages for 1937 and 1932-36 among the females are 29.6 and 28.8, respectively. With regard to the females, however, the substitution of either diseases of the pharynx and tonsils or appendicitis for nonindustrial injuries would yield slightly higher percentages for 1937 and slightly lower ones for 1932-36.

With respect to the males and with the exception of influenza and grippe and nonindustrial injuries, the percentages for each of the remaining causes are 5.7 or less for both 1937 and 1932-36. The females, on the other hand, with the exception of influenza and grippe, show a number of causes with percentages lying between 5.7 and 10.0 percent but none above 10.0 percent.

TABLE 3.—Number of disabling cases, and percentage of total number of disabling cases of sickness and nonindustrial injuries lasting 8 consecutive calendar days or longer among male and female industrial employees in various industries, by cause—experience of 1937 compared with that of 1932-36, inclusive

Cause. (Numbers in parentheses are disease title numbers from the International List of the Causes of Death, fourth revision, Paris, 1929)	Number of cases				Percentage of total number of cases			
	Males		Females		Males		Females	
	1937	1932-36, inclusive	1937	1932-36, inclusive	1937	1932-36, inclusive	1937	1932-36, inclusive
Sickness and nonindustrial injuries.....	19,996	71,073	2,557	10,684	100.0	100.0	100.0	100.0
Influenza and grippe (11).....	4,298	12,320	573	2,101	21.5	17.3	22.4	19.7
Nonindustrial injuries (163-198).....	2,380	9,656	134	972	11.9	13.6	7.2	9.1
Other respiratory diseases (104, 105, 110-114).....	1,131	3,674	185	582	5.7	5.2	7.2	5.4
Diseases of the pharynx and tonsils (115a).....	1,091	3,700	233	830	5.5	5.2	9.1	7.8
Bronchitis, acute and chronic (106).....	940	2,991	128	535	4.7	4.2	5.0	5.0
Appendicitis (121).....	887	3,082	233	750	4.4	4.3	9.1	7.0
Rheumatism, acute and chronic (56, 57).....	826	3,677	49	257	4.1	5.2	1.9	2.4
Diseases of the stomach, except cancer (117, 118).....	795	2,922	37	215	4.0	4.1	1.4	2.3
Diseases of the skin (151-153).....	618	2,227	56	246	3.1	3.1	2.2	2.3
Other circulatory diseases (96-103).....	616	2,301	59	187	3.1	3.2	2.3	1.8
Ill-defined and unknown causes (200).....	608	1,717	82	300	3.0	2.4	3.2	2.8
Pneumonia, all forms (107-109).....	601	1,758	19	101	3.0	2.5	.7	1.0
Diseases of the organs of locomotion, except diseases of the joints (156b).....	589	2,400	21	135	2.9	3.4	.8	1.3
Infectious and parasitic diseases (1-10, 12-22, 24-33, 36-44).....	541	2,047	52	289	2.7	2.9	2.0	2.7
Other digestive diseases (115b, 116, 122b-129).....	501	2,374	83	474	2.5	3.3	3.2	4.4
Diseases of the heart (90-95).....	496	1,857	22	122	2.5	2.6	.9	1.1
Other genitourinary diseases (133-138).....	458	1,946	158	752	2.3	2.7	6.2	7.0
Neuralgia, neuritis, sciatica (87e).....	437	1,736	40	190	2.2	2.4	1.6	1.8
Hernia (122a).....	311	1,271	7	29	1.5	1.8	.3	.3
Diarrhea and enteritis (120).....	285	962	41	175	1.4	1.4	1.6	1.6
Neurosthenia and the like (part of 87b).....	222	842	91	448	1.1	1.2	3.6	4.2
Other diseases of the nervous system (78-85, part of 87b).....	194	1,032	17	82	1.0	1.5	.7	.8
Tuberculosis of the respiratory system (23).....	151	708	10	78	.8	1.0	.4	.7
Nephritis, acute and chronic (130-132).....	93	466	4	33	.5	.7	.2	.3
Cancer, all sites (45-53).....	81	397	5	31	.4	.6	.2	.3
All other diseases (54, 55, 58-77, 88, 89, 154-156a, 157, 162).....	844	3,010	168	740	4.2	4.2	6.6	6.9

Frequency of disability among males, by industry, during 1937 as compared with 1932-36.—As noted above, there is a 15 percent excess in the frequency of all sickness and nonindustrial injuries among males during 1937 as compared with 1932-36. It is of interest to observe this particular percentage excess when the reporting establishments are classified into industrial groups such as public utilities, iron and steel, and miscellaneous industries (table 4). It will be seen that the rates for the different industrial groups for 1937 are much the same and consistently higher than those for the period 1932-36, the percentage excesses being 19, 13, and 11 for iron and steel, miscellaneous industries, and public utilities, respectively.

TABLE 4.—Frequency of disabling cases of sickness and nonindustrial injuries lasting 8 calendar days or longer among MALE industrial employees, by industry—experience of 1937 compared with that of 1932-36, inclusive

Industry	Percent- age the 1937 rate is above the rate for 1932- 36, in- clusive	Annual number of cases per 1,000 males		Number of cases		Number of males	
		1937	1932-36, inclusive	1937	1932-36, inclusive	1937	1932-36, inclusive
All.....	15	99.5	86.7	19,996	71,008	200,967	819,464
Public utilities.....	11	99.8	90.0	3,167	13,950	31,728	155,042
Iron and steel.....	19	99.2	83.5	10,074	28,658	101,602	343,223
Miscellaneous industries.....	13	99.9	88.4	6,755	28,400	67,637	321,199

TABLE 5.—Frequency of disabling cases of sickness and nonindustrial injuries lasting 8 consecutive calendar days or longer among MALE employees in various industries, by cause—first quarter of 1938 compared with the first quarters of 1933-37¹

Cause. (Numbers in parentheses are disease title numbers from the International List of the Causes of Death, fourth revision, Paris, 1929)	Annual number of cases per 1,000 men in the first quarter of—		
	1938	1937	5 years 1933-37
Sickness and nonindustrial injuries ²	95.8	147.1	116.6
Nonindustrial injuries (163-196).....	10.7	10.1	10.7
Sickness ²	85.1	137.0	105.9
Respiratory diseases.....	37.9	87.5	58.3
Influenza and grippe (11).....	16.3	60.9	36.4
Bronchitis, acute and chronic (106).....	6.2	7.5	5.7
Diseases of the pharynx and tonsils (115a).....	5.4	5.9	5.4
Pneumonia, all forms (107-109).....	2.9	4.5	3.8
Tuberculosis of the respiratory system (23).....	.8	.8	.8
Other respiratory diseases (104, 105, 110-114).....	6.3	7.9	6.2
Nonrespiratory diseases.....	47.2	49.5	47.6
Digestive diseases.....	13.0	13.5	13.0
Diseases of the stomach, except cancer (117, 118).....	3.7	3.9	3.6
Diarrhea and enteritis (120).....	.6	.8	.9
Appendicitis (121).....	4.2	4.5	3.9
Hernia (122a).....	1.8	1.5	1.6
Other digestive diseases (115b, 116, 122b-129).....	2.7	2.8	3.0
Nondigestive diseases.....	34.2	36.0	34.6
Diseases of the heart and arteries, and nephritis (90-99, 102, 130-132).....	4.5	5.0	4.5
Other genitourinary diseases (133-138).....	2.5	2.1	2.3
Neuralgia, neuritis, sciatica (87a).....	2.7	2.6	2.5
Neurasthenia and the like (part of 87b).....	1.0	.8	.8
Other diseases of the nervous system (78-85, part of 87b).....	1.3	.8	1.3
Rheumatism, acute and chronic (56,57).....	4.3	4.4	5.1
Diseases of the organs of locomotion, except diseases of the joints (156b).....	2.7	2.7	3.0
Diseases of the skin (151-153).....	2.9	3.1	2.6
Infectious and parasitic diseases (1-10, 12-22, 24-33, 36-44).....	2.7	3.9	3.4
Ill-defined and unknown causes (200).....	2.4	3.6	2.4
All other diseases (45-55, 58-77, 88, 89, 100, 101, 103, 154-156a, 157, 162).....	7.2	7.0	6.7
Average number of males covered in the record.....	173,452	176,209	148,282
Number of organizations.....	26	26	-----

¹ In 1938 and 1937 the same organizations are included; the rates for the first quarters of the years 1933-37, however, are based on records from the same 26 organizations and some additional reporting organizations.

² Exclusive of disability from the venereal diseases and a few numerically unimportant causes of disability.

FIRST QUARTER, 1938

The morbidity experience among male members of 26 sick benefit organizations for the first quarter of 1938 as compared with the corresponding months of certain earlier years is shown in table 5. The frequency rate for sickness and nonindustrial injuries for the first quarter of 1938 (95.8) is the lowest that has been recorded for the first quarter of any year since 1934 (93.0). Interest in the table centers round the respiratory diseases which are apparently chiefly responsible for the reduction of 35 percent in the frequency of sickness and nonindustrial injuries during the first quarter of 1938 as compared with the corresponding quarter of 1937. The rate for the respiratory diseases for the first quarter of 1938 (37.9) is 57 percent lower than the rate for the corresponding months of the preceding year (87.5), the former rate being the lowest for this period since 1934 (36.2). Of interest also is the reduction of 31 percent in the frequency of infectious and parasitic diseases during the first quarter of 1938 as compared with the corresponding quarter of 1937.

SUMMARY

Records were obtained of cases of sickness and nonindustrial injuries lasting 8 consecutive calendar days or longer during 1937 for which benefits were paid to members of 29 industrial sick benefit organizations. A total of 19,996 cases was recorded for 200,967 males, and 2,557 cases for 16,921 females.

The frequency of sickness and nonindustrial injuries among the males in 1937 was 99.5 cases per 1,000 as compared with the average rate of 86.7 for the 5-year period, 1932-36; for the females the corresponding rates were 151.1 for 1937, and 144.6 for 1932-36.

The frequency of influenza and grippe (21.4 cases per 1,000 males) in 1937 was approximately 43 percent greater than the average for the 5 years, the corresponding rate and percentage excess for the females being 33.9 and 18, respectively.

With regard to the trends of the frequencies of the different causes of disability for 1932-37, there was some indication, among both sexes, of an increasing trend in diseases of the pharynx and tonsils, diarrhea and enteritis, appendicitis, bronchitis (males only), pneumonia (males only), and diseases of the skin (males only), while, on the other hand, decreasing trends were suggested in pneumonia (females only), tuberculosis of the respiratory system, diseases of the stomach except cancer (females only), rheumatism, and cancer.

The frequency rate for sickness and nonindustrial injuries among males for the first quarter of 1938 (95.8 cases per 1,000 males) was the lowest rate for that period since 1934 (93.0).

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CHANGES IN THE TYPES OF VISUAL REFRACTIVE ERRORS OF CHILDREN¹

A Statistical Study

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In 1924 the United States Public Health Service initiated a study of the vision of a sample of white school children in Washington, D. C. The purposes of this study, as stated in earlier papers (3, 4), were (1) to determine the number of refractive errors in school children by using a cycloplegic and employing the services of an ophthalmologist; (2) to determine, if possible, at what ages myopia tends to develop, and the progress of this condition; and (3) to determine what changes may take place in the eyeball during the process of growth of the school child.

As the method of examination has been described in detail in the papers cited, it is sufficient to mention here that the children received a Snellen visual acuity test before and after the administration of a cycloplegic (2 percent homatropine hydrobromide) and that they also received a careful ophthalmologic and retinoscopic examination.

In 1924, 1,860 children were examined in this manner. Subsequently, in 1926, a number of them were reexamined, together with a new sample of children. In 1929 and again in 1930 the survey was repeated, and so at present there are records of the examinations of 4,810 children, of whom 3,329 were examined only once and 1,481 were examined twice or more.

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The first report on the results of repeated examinations on the same children deals with the changes in the types of refractive errors noted in 1,481 children examined twice after an average interval of nearly 2½ years (28.5 months).

THE PROBLEM

Surveys of the vision of school children (3, 4), together with numerous clinical reports (1, 2) which have followed the report of Randall (5) in 1885, have shown that hyperopia is prevalent in early infancy and childhood and that its incidence tends to decrease with advancing age. On the other hand, in older children the frequency of myopia and corneal astigmatism is higher than in the younger ones. The sequence of events taking place in the individual eye which brings about a change of type of optical defect, however, is very incompletely known. Moreover, serial studies of the visual acuity of children have not been made; and, in general, data on repeated examinations of the same persons over a period of time have been collected only for children and adults with pathologic conditions (6, 7, 8). The present survey thus represents an attempt to supply some of the information which is lacking and which is needed before a rational public health program for the conservation of the eyesight of children can be formulated. Such being the main purpose of the investigation, the analysis of the collected material is directed towards arriving at an estimate of—

- (1) The frequency of changes in the types of optical defects according to the age of the children.
- (2) The relation between the degree of refractive errors, visual acuity, and the changes with age.

The present report is limited to a discussion of item (1), that is, to the occurrence of changes sufficient to transfer the eye from one category of refractive errors to another. Consequently, the frequency of changes in the degree of myopia, hyperopia, and so on, will not be considered here, but only the number of cases in which, for example, the eyes classed as myopic at the first examination were classed as hyperopic at the second. The study is purposely thus limited, since it is important to obtain first of all a clear picture of the extent of the modifications of the types of refractive errors in relation to the development of children.

REFRACTIVE ERRORS AT THE FIRST AND SECOND EXAMINATION

In table 1 is given the distribution of the main categories of refractive errors observed in the right eye of 1,481 children at the first and at the second examination. In the classification of the optical defects, the same procedure has been followed as that described in the

previous publications cited. Under the heading of emmetropia are included only those eyes that needed no correction whatsoever. Since the indicated correction (complete correction necessary to make the eye emmetropic) was recorded to the nearest quarter diopter, this means that, included under hyperopia, for example, are eyes that needed a correction as small as a quarter diopter.

TABLE 1.—*Number and percent of children with specified refractive errors in right eye at the first and second examinations. (1,481 white school children of Washington, D. C., reexamined after an average interval of 2½ years)*

Refractive error in right eye	First examination		Second examination	
	Number of children	Percent	Number of children	Percent
Emmetropia.....	32	2.2	31	2.1
Hyperopia.....	1,008	68.1	819	55.3
Myopia.....	54	3.6	92	6.2
Hyperopic astigmatism.....	345	23.3	482	32.5
Myopic astigmatism.....	22	1.5	36	2.4
Mixed astigmatism.....	20	1.4	21	1.4
Total.....	1,481	100.1	1,481	100.1

From the table it is seen that, during the average interval of almost 2½ years between examinations, the following changes took place in the frequency of the stated refractive errors in this group of children:

1. The proportion of individuals showing emmetropia and mixed astigmatism did not alter.
2. The frequency of hyperopia was reduced by almost 20 percent.
3. The number of cases of hyperopic astigmatism increased by about 40 percent.
4. The frequency of myopia and myopic astigmatism increased by about 70 and 65 percent, respectively.

The types of these changes are those which would be expected on the basis of information now available regarding the frequency of these refractive errors among children of different ages. The next step is to inquire how these changes occurred and whether the probability of occurrence is the same at all ages.

TRANSFORMATION OF REFRACTIVE ERRORS

The direction of the changes in the types of refractive errors after an average interval of almost 2½ years is shown in table 2 which has been constructed to answer the following question: Given N children whose right eye had a refractive error A at the first examination, what percentages were found at the second examination to have a refractive error B , C , or D ? For example, what percentage of children with hyperopia in the right eye developed myopia in that eye after 2½ years? The answer, shown in table 2, is 2.6 percent. From the table the following facts appear noteworthy:

TABLE 2.—Number of children with stated refractive errors in right eye at the first examination and the percentage distributions of refractive errors found at the second examination

First examination		Second examination						
Refractive error	Number of children	Percent children with—						
		Emmetropia	Hyperopia	Myopia	Astigmatism			Total
					Hyperopic	Myopic	Mixed	
Emmetropia.....	32	31.3	21.9	34.4	6.3	6.3	-----	100.2
Hyperopia.....	1,008	1.8	74.6	2.6	20.4	.5	0.2	100.1
Myopia.....	64	-----	1.9	85.2	1.9	11.1	-----	100.1
Hyperopic astigmatism.....	345	.9	16.8	1.4	79.1	.9	.9	100.0
Myopic astigmatism.....	22	-----	-----	13.6	-----	81.8	4.5	99.9
Mixed astigmatism.....	20	-----	5.0	5.0	-----	15.0	75.0	100.0

1. Emmetropia was the least stable of the optic conditions. This is probably due to the fact that the possible range of variation in the refraction of an eye classed as emmetropic is very narrow. To be more explicit, an eye with an error of +3.00 diopters at the first examination might change to +0.50 diopters at the second and still be classified as hyperopic, while for an eye classified as emmetropic at the first examination, an alteration in refraction by 0.25 diopters in either the plus or minus direction would be sufficient to bring about a change in classification. Of the emmetropic eyes that changed, the percentage which became hyperopic was somewhat lower than that which became myopic. None of the eyes with simple myopia or myopic astigmatism became emmetropic during the interval between examinations, although this did occur for a small percentage of eyes with hyperopia and hyperopic astigmatism.

2. Myopia and myopic astigmatism appeared to be the most stable of the categories of refractive errors. Over 50 percent of the eyes with these conditions remained unchanged relative to types of error. The majority of eyes with myopia which did change developed astigmatism in addition to the myopia. On the other hand, when the eyes with myopic astigmatism changed, it was more often because the refraction along the two main axes of the eye had become equalized and thus the eye returned to its primitive myopic condition.

3. While hyperopia and hyperopic astigmatism appeared somewhat less stable than the myopic conditions, the characteristic trend of the changes is similar; that is, the majority of the hyperopic eyes in which the refractive error was modified became astigmatic, while the majority of eyes with hyperopic astigmatism at the first examination and which did not remain the same at the second became simple hyperopic.

4. The chances of developing astigmatism appear higher in the hyperopic eyes than in the myopic. On the other hand, the chances

of developing myopia appear higher in the emmetropic than in the hyperopic eyes.

The most important fact which emerges from these observations is that, while it is possible for the refractive errors to be altered in any direction, for the majority of eyes this did not take place during the average $2\frac{1}{2}$ years between examinations. When it did, the tendency was for the nonastigmatic to become astigmatic and for the astigmatic to become nonastigmatic.

AGE AND CHANGES IN TYPES OF REFRACTIVE ERRORS

For each specified age group, table 3 presents the percentage of children whose right eyes at the second examination were found to have a type of optical defect other than that found at the first examination. Taking all errors together, it is observed that the relative frequency of the changes decreases as age increases. About 30 percent of the children of 6-7 years of age at the first examination had another type of refractive error at the second. On the other hand, after an average interval of $2\frac{1}{2}$ years about 15 percent of the children aged 14 and over had a type of refractive error different from that recorded at the first examination. This age trend is definite for hyperopia and hyperopic astigmatism but may not be true for myopia and myopic astigmatism. However, due to the low incidence of these last conditions it is not certain whether the apparent reversal of the trend noted for them is significant or merely due to chance.

TABLE 3.—Number of children in each age class with specified refractive errors in right eye and percent who changed after an average interval of $2\frac{1}{2}$ years

Refractive error	Age at first examination, in years											
	6 to 7		8 to 9		10 to 11		12 to 13		14 and over		All ages	
	Number of children	Percent changed	Number of children	Percent changed	Number of children	Percent changed	Number of children	Percent changed	Number of children	Percent changed	Number of children	Percent changed
Emmetropia.....	4	75.0	6	83.3	8	87.5	11	54.5	3	33.3	32	68.9
Hyperopia.....	180	28.9	291	25.4	194	23.7	283	26.6	60	15.0	1,008	25.5
Myopia.....	4	-----	12	-----	12	33.3	21	14.3	5	20.0	54	14.9
Hyperopic astigmatism.....	42	31.0	101	26.7	75	17.3	110	17.3	17	5.9	345	20.9
Myopic astigmatism.....	1	-----	4	-----	6	16.7	9	25.0	2	50.0	22	18.1
Mixed astigmatism.....	1	100.0	4	50.0	4	50.0	10	-----	1	-----	20	25.0
All refractive errors.....	232	29.7	418	25.6	299	24.4	444	23.9	88	14.7	1,481	24.9

It may be noted at this point that the time interval between examinations was not the same for the children of each age group. The mean interval was 31.5 months for the children 6-7 years of age, and it decreases regularly for each successive age group until it reaches 26.2 months for the children aged 14 years and over at the

first examination. Since it can be demonstrated that the probability of changes in type of refractive errors is also a function of the length of time between examination, for each age group, the figures in table 3 must be corrected to eliminate the differences in interval between tests. The procedure adopted in this correction is the one familiar to statisticians and used, for example, when correcting the death rates observed in different population groups by standardizing the age distributions of the respective populations. For each age group in this sample of children, the "interval-specific" rates² of changes have been computed and then applied³ to the distribution of intervals found for all the children in the sample. In this manner, the distribution of the intervals for each age group is made equal to that of the whole group of children.

The results of this correction are presented in table 4. In order not to render the numbers too small, only the corrections for the percentage changes in type of error when all refractive errors are taken together have been computed. Comparison of the percentages in table 4 with those in the last row of table 3 demonstrate that the age trend in the percentages of changes has not been altered in its essential feature after correction has been made for the differences in time interval between examination.

TABLE 4.—Percentage of children found to have at the second examination a refractive error of other type than that observed at first examination. (Distribution of intervals between examinations made equal for all age groups)

Age at first examination (in years)	Percent (corrected ¹) of children in whom refractive error changed	Age at first examination (in years)	Percent (corrected ¹) of children in whom refractive error changed
6 to 7.....	27.7	12 to 13.....	24.4
8 to 9.....	25.4	14 and over.....	15.8
10 to 11.....	23.8		

¹ See text for explanation of method of correction.

The data in tables 3 and 4 suggest that, in the preadolescent period, the optic system of the child is in a greater flux than it is later. The validity of such a conclusion, it is realized, is limited by the size of the sample and the age range of the children under observation. This

² Interval-specific rate = $R_{at} = 100 n_{at}/N_{at}$; where N_{at} equals the number of children of age a whose second test took place at a time interval t from the first, and n_{at} is the number of these children whose type of refractive error was found different at the second examination.

³ Thus, the corrected percentage of changes for the children of age a is equal to

$$\frac{\sum_{t=0}^{t=x} R_{at} \times N_t}{N}$$

where N equals the total number of children in the sample and N_t is the number of children, all ages combined, whose second test took place at a time interval t from the first.

conclusion appears strengthened, however, when we consider the frequency with which children of each age group developed myopia and astigmatism, the two conditions which, as shown in table 1, increased greatly during the interval of 2½ years. In table 5 is presented for each age group the actual and corrected percentages of children who developed myopia (simple and astigmatic) and who developed astigmatism (hyperopic, myopic, and mixed) in the interval between the two examinations. For each condition the percentages have been computed on the basis of the children whose right eye did not show the specific refractive error at the first examination. The corrected percentages are those obtained when for each age group the distribution of the intervals between examination is made equal to that found for all of the children.

From table 5 it is seen that the incidence of new cases of myopia tends to increase slightly for each age group up to that of 10–11 years and then declines for the successive age classes. Between 10 and 13 years of age, on the average, a myopic condition developed in 5 percent of the children. After the age of 14 new cases developed in only 1.3 percent. For astigmatism the pattern of age specific incidence is different. New cases of astigmatism occur more frequently for the 6–7 year class and for the 12–13 year age class than for other age groups. As in the case of myopia, the age 14 and over represents the period of minimum incidence of new cases of astigmatism.

TABLE 5.—Age specific incidence of myopia (simple and astigmatic) and of astigmatism (all forms) observed after an average interval of 2½ years between examinations

Age at first examination (in years)	Incidence of myopia				Incidence of astigmatism			
	Non-myopic first examination	Myopic second examination			Non-astigmatic first examination	Astigmatic second examination		
		Number	Percent			Number	Percent	
			Actual	Corrected ¹			Actual	Corrected ¹
6 to 7.....	226	10	4.4	4.4	188	47	25.0	22.9
8 to 9.....	398	20	5.0	4.6	309	60	19.4	19.5
10 to 11.....	277	14	5.1	5.1	214	39	18.2	18.3
12 to 13.....	404	13	3.2	3.3	314	69	22.0	23.0
14 and over.....	80	1	1.3	1.3	68	8	11.8	13.2
All ages.....	1,385	58	4.2	-----	1,093	223	20.4	-----

¹ See text for explanation of method of correction.

With due regard to the limitations of the material relative to size of sample and age range, one is led to conclude from these data that the problem of prevention and care of astigmatism may be more important than that regarding myopia, but both conditions have in common the fact that their development occurs much more frequently in the children of preadolescent age. If these facts are to be

taken at face value, it would seem safe to suggest that health measures, in order to be most efficacious, should be directed especially towards the care of children at the youngest age at which it is feasible to begin observations.

SUMMARY

The first statistical study of the results of the repeated retinoscopic examination of 1,481 white school children of Washington, D. C., reexamined after an average interval of almost 2½ years reveals that—

1. The frequency of simple hyperopia was reduced by almost 20 percent while that of astigmatism (hyperopic and myopic) increased by about 40 percent, and of simple myopia by about 70 percent.

2. Over 75 percent of the eyes with any of the main types of refractive errors remained unchanged during the stated interval. When changes did occur, the nonastigmatic conditions (simple myopia and hyperopia) were transformed to astigmatism, while the astigmatisms changed back to the simple refractive errors.

3. The chances of a change in type of refractive error appeared to decrease with increase in the age of the children.

4. Within the 2½-year interval the age specific incidence rate of myopia (simple and astigmatic) was highest for the children 10–11 years old at the first examination and was lowest for the children of 14 years and over. With regard to astigmatism (all forms), the age specific incidence rate was highest for the children 6–7 and 12–13 years old. The lowest incidence of new cases of astigmatism was also found among the children of 14 years and over.

In a subsequent paper will be discussed the frequency of changes in refractive errors in relation to degree of deviation of the eye from emmetropia and to the visual acuity.

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DEATHS DURING WEEK ENDED AUG. 13, 1938

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

	Week ended Aug. 13, 1938	Correspond- ing week, 1937
Data from 88 large cities of the United States:		
Total deaths.....	7,381	¹ 7,413
Average for 3 prior years.....	¹ 7,041	-----
Total deaths, first 32 weeks of year.....	265,870	289,402
Deaths under 1 year of age.....	495	¹ 545
Average for 3 prior years.....	¹ 493	-----
Deaths under 1 year of age, first 32 weeks of year.....	16,993	18,476
Data from industrial insurance companies:		
Policies in force.....	68,447,846	69,649,435
Number of death claims.....	10,549	11,290
Death claims per 1,000 policies in force, annual rate.....	8.0	8.5
Death claims per 1,000 policies, first 32 weeks of year, annual rate.....	9.4	10.3

¹ Data for 86 cities.

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

In these and the following tables, a zero (0) indicates a positive report and has the same significance as any other figure, while leaders (-----) represent no report, with the implication that cases or deaths may have occurred but were not reported to the State health officer.

Cases of certain diseases reported by telegraph by State health officers for the week ended Aug. 20, 1938, rates per 100,000 population (annual basis), and comparison with corresponding week of 1937 and 5-year median

Division and State	Diphtheria				Influenza				Measles			
	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median
NEW ENGLAND												
Maine.....	0	0	0	0	-----	-----	-----	-----	79	13	1	3
New Hampshire..	0	0	0	0	-----	-----	-----	-----	10	1	4	3
Vermont.....	14	1	0	0	-----	-----	-----	-----	150	11	1	2
Massachusetts....	2	2	3	6	-----	-----	-----	-----	59	50	27	27
Rhode Island.....	0	0	0	1	-----	-----	-----	-----	-----	-----	-----	-----
Connecticut.....	0	0	7	2	3	1	1	1	9	3	9	10
MIDDLE ATLANTIC												
New York.....	7	17	19	17	(1)	(1)	1	1	56	138	127	120
New Jersey ¹	6	5	5	8	4	3	4	4	18	15	36	36
Pennsylvania.....	10	19	14	20	-----	-----	-----	-----	26	51	97	77
EAST NORTH CENTRAL												
Ohio.....	12	15	8	9	-----	-----	5	5	9	11	117	63
Indiana ¹	8	5	3	11	-----	-----	-----	5	8	5	11	5
Illinois ¹	8	12	17	17	1	2	4	4	13	20	64	52
Michigan ²	6	6	10	9	-----	-----	1	1	110	102	36	23
Wisconsin.....	2	1	2	2	5	3	15	16	150	84	37	37
WEST NORTH CENTRAL												
Minnesota.....	16	8	1	2	2	1	2	-----	51	26	2	11
Iowa.....	6	3	1	4	4	2	-----	-----	8	4	5	4
Missouri.....	12	9	17	15	39	30	46	22	10	8	31	10
North Dakota.....	0	0	5	2	66	9	1	-----	89	12	-----	5
South Dakota.....	0	0	1	1	-----	-----	-----	-----	-----	-----	-----	-----
Nebraska.....	4	1	1	2	-----	-----	-----	-----	19	5	1	2
Kansas.....	6	2	3	6	-----	-----	1	-----	20	7	5	5

See footnotes at end of table.

Cases of certain diseases reported by telegraph by State health officers for the week ended Aug. 20, 1938, rates per 100,000 population (annual basis), and comparison with corresponding week of 1937 and 5-year median—Continued

Division and State	Diphtheria				Influenza				Measles			
	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median
SOUTH ATLANTIC												
Delaware ¹	0	0	0	1								1
Maryland ²	16	5	5	5	12	4		2	19	6	3	7
Dist. of Columbia ¹	8	1	3	4					17	2	5	4
Virginia ²	29	15	17	19					87	45	1	22
West Virginia.....	22	8	5	11	31	11	9	15	8	3	8	8
North Carolina ²	46	31	23	19				1	49	33	27	19
South Carolina ⁴	14	5	5	5	106	38	50	52	6	2	5	5
Georgia ⁴	85	50	30	25								
Florida ⁴	31	10	5	5				1	19	6	10	10
EAST SOUTH CENTRAL												
Kentucky ²	11	6	8	12	2	1	3		9	5	22	22
Tennessee ²	16	9	13	13	23	13	4	5	49	27	24	9
Alabama ⁴	61	34	13	19	31	17	2	4	7	4	5	5
Mississippi ²	52	20	9	9								
WEST SOUTH CENTRAL												
Arkansas.....	28	11	8	5	10	4	2	2	23	9	6	1
Louisiana.....	46	19	10	12	10	4	11	11	5	2		5
Oklahoma.....	20	10	2	6	94	46	1	7	6	3	1	1
Texas ⁴	35	41	36	39	82	97	45	28	12	14	51	21
MOUNTAIN												
Montana.....	0	0	2	1	68	7			174	18	13	9
Idaho ²	0	0	2	0				3	11	1	1	2
Wyoming.....	0	0	0	0							2	2
Colorado ²	29	6	2	2					24	5	6	6
New Mexico.....	0	0	3	3					49	4	35	8
Arizona.....	202	16	1	1	152	12	5	3	101	8		6
Utah ²	10	1	1	1					131	13	8	8
PACIFIC												
Washington.....	6	2	1	1					22	7	11	11
Oregon.....	5	1	1	0	46	9	13	6	61	12	1	3
California.....	16	19	19	19	8	10	9	9	122	144	23	45
Total.....	17	426	341	401	16	324	238	238	39	939	879	879
33 weeks.....	18	14,515	13,743	18,120	70	46,058	274,499	141,707	945	760,580	241,144	341,783

See footnotes at end of table.

Cases of certain diseases reported by telegraph by State health officers for the week ended Aug. 20, 1938, rates per 100,000 population (annual basis), and comparison with corresponding week of 1937 and 5-year median—Continued

Division and State	Meningitis, meningococcus				Poliomyelitis				Scarlet fever			
	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median
NEW ENGLAND												
Maine.....	0	0	0	0	12	2	6	4	12	2	4	4
New Hampshire.....	0	0	0	0	0	0	1	1	10	1	1	2
Vermont.....	0	0	0	0	0	0	3	0	54	4	3	3
Massachusetts.....	4	3	1	1	1.2	1	41	41	40	24	25	40
Rhode Island.....	0	0	0	0	0	0	0	0	0	0	2	2
Connecticut.....	0	0	0	0	0	0	6	4	18	6	7	8
MIDDLE ATLANTIC												
New York.....	2.8	7	7	7	4	9	39	39	22	55	92	82
New Jersey ¹	0	0	0	1	5	4	14	14	24	20	12	18
Pennsylvania.....	2	4	8	3	2.6	5	21	12	25	49	53	76
EAST NORTH CENTRAL												
Ohio.....	0.8	1	0	1	0	0	22	11	31	40	62	62
Indiana ²	0	0	1	1	0	0	12	3	21	14	11	17
Illinois ¹.....	.7	1	3	6	5	7	54	16	42	64	66	78
Michigan ¹	1.1	1	1	1	0	0	21	13	58	54	69	61
Wisconsin ²	0	0	0	0	1.8	1	6	1	60	37	33	33
WEST NORTH CENTRAL												
Minnesota.....	2	1	2	0	10	5	10	10	39	20	19	21
Iowa.....	4	2	0	0	4	2	7	2	14	7	15	13
Missouri.....	1.3	1	0	1	1.3	1	13	2	14	11	44	23
North Dakota.....	7	1	0	0	7	1	0	0	30	4	4	11
South Dakota.....	0	0	0	0	8	1	1	1	30	4	9	9
Nebraska.....	0	0	1	0	4	1	15	0	15	4	2	8
Kansas.....	2.8	1	2	1	0	0	13	2	67	24	12	18
SOUTH ATLANTIC												
Delaware ¹	0	0	0	0	0	0	0	0	20	1	-----	1
Maryland ^{1,2}	0	0	3	3	6	2	5	5	6	2	12	11
District of Columbia ²	0	0	3	3	2.5	3	3	1	33	4	2	3
Virginia ²	0	0	3	2	1.9	1	1	6	10	5	10	19
West Virginia.....	2.8	1	4	1	2.8	4	5	5	25	9	11	17
North Carolina ^{2,4}	1.5	1	3	0	6	4	5	5	36	24	5	17
South Carolina ⁴	0	0	0	0	0	0	0	0	3	1	-----	1
Georgia ⁴	1.7	1	0	0	1.7	1	5	1	14	8	9	9
Florida ⁴	0	0	2	0	0	0	3	1	0	0	3	3
EAST SOUTH CENTRAL												
Kentucky ²	0	0	2	2	1.8	1	4	6	37	21	31	27
Tennessee ²	13	7	1	2	1.8	1	1	5	34	19	-----	10
Alabama ⁴	1.8	1	2	0	7	4	2	2	22	12	8	7
Mississippi ^{2,4}	2.6	1	1	1	5	2	11	1	15	6	5	5
WEST SOUTH CENTRAL												
Arkansas.....	0	0	0	0	2.5	1	10	1	33	13	6	5
Louisiana.....	7	3	2	1	5	2	6	1	27	11	11	6
Oklahoma.....	2	1	2	0	2	1	19	0	10	5	7	7
Texas ⁴	1.7	2	4	1	1.7	2	51	1	25	30	32	28
MOUNTAIN												
Montana.....	10	1	2	0	0	0	3	1	77	8	12	7
Idaho ²	0	0	0	0	0	0	0	0	21	2	-----	3
Wyoming.....	0	0	0	0	0	0	0	0	0	0	-----	4
Colorado ⁴	5	1	0	0	0	0	21	2	49	10	3	8
New Mexico.....	0	0	0	0	0	0	1	0	12	1	4	4
Arizona.....	13	1	1	0	0	0	0	0	13	1	2	2
Utah ²	0	0	0	0	0	0	0	1	80	8	38	6
PACIFIC												
Washington.....	3	1	0	0	0	0	3	3	19	6	4	11
Oregon.....	0	0	0	0	0	0	3	2	71	14	8	8
California.....	3	4	6	3	9	11	25	25	48	57	51	51
Total.....	2	49	67	56	3	77	492	335	30	732	819	910
33 weeks.....	2.6	2,163	4,187	4,165	1.1	934	3,432	3,432	168	137,185	164,859	164,859

See footnotes at end of table.

Cases of certain diseases reported by telegraph by State health officers for the week ended Aug. 20, 1938, rates per 100,000 population (annual basis), and comparison with corresponding week of 1937 and 5-year median—Continued

Division and State	Smallpox				Typhoid and paratyphoid fever				Whooping cough	
	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median	Aug. 20, 1938, rate	Aug. 20, 1938, cases	Aug. 21, 1937, cases	1933-1937 median	Aug. 20, 1938, rate	Aug. 20, 1938, cases
NEW ENGLAND										
Maine.....	0	0	0	0	24	4	0	4	91	15
New Hampshire.....	0	0	0	0	0	0	0	0	-----	-----
Vermont.....	0	0	0	0	0	0	1	1	123	9
Massachusetts.....	0	0	0	0	2	2	1	3	84	71
Rhode Island.....	0	0	0	0	15	2	1	1	100	13
Connecticut.....	0	0	0	0	6	2	2	2	126	42
MIDDLE ATLANTIC										
New York.....	0	0	0	0	18	44	25	28	263	654
New Jersey ¹	0	0	0	0	4	3	9	9	317	264
Pennsylvania.....	0	0	0	0	10	19	23	23	155	303
EAST NORTH CENTRAL										
Ohio.....	1	1	1	0	18	23	51	41	70	90
Indiana ¹	3	2	6	0	23	15	4	9	11	7
Illinois ¹	1	2	10	2	13	19	24	33	363	548
Michigan ²	4	4	1	1	8	7	23	14	377	349
Wisconsin.....	0	0	1	2	7	4	1	2	761	427
WEST NORTH CENTRAL										
Minnesota.....	0	0	5	0	0	0	2	2	106	55
Iowa.....	0	0	2	0	16	8	5	5	25	12
Missouri.....	4	3	7	1	29	22	37	25	24	18
North Dakota.....	7	1	1	1	0	0	0	1	318	43
South Dakota.....	0	0	1	0	8	1	0	2	15	2
Nebraska.....	0	0	0	0	4	1	0	0	69	18
Kansas.....	3	1	0	0	31	11	4	15	123	44
SOUTH ATLANTIC										
Delaware ¹	0	0	0	0	20	1	1	1	80	4
Maryland ²	0	0	0	0	28	9	12	17	106	34
District of Columbia ²	0	0	0	0	25	3	3	1	58	7
Virginia ¹	0	0	0	0	35	18	17	32	83	43
West Virginia.....	0	0	0	0	98	35	21	21	56	20
North Carolina ^{2,4}	0	0	0	0	22	15	26	26	317	212
South Carolina ⁴	0	0	0	0	42	15	18	26	86	21
Georgia ⁴	0	0	0	0	41	24	19	37	37	22
Florida ⁴	0	0	0	0	9	3	4	4	59	19
EAST SOUTH CENTRAL										
Kentucky ¹	0	0	0	0	86	48	33	61	87	49
Tennessee ¹	0	0	0	0	54	30	62	56	90	50
Alabama ⁴	0	0	0	0	31	17	14	28	68	38
Mississippi ^{2,4}	0	0	0	0	15	6	5	13	-----	-----
WEST SOUTH CENTRAL										
Arkansas.....	0	0	0	0	46	18	40	14	13	5
Louisiana.....	0	0	0	0	37	15	18	21	68	28
Oklahoma.....	0	0	0	0	35	17	27	27	25	12
Texas ⁴	0	0	1	47	56	78	63	63	150	178
MOUNTAIN										
Montana.....	0	0	11	1	0	0	5	7	687	71
Idaho ²	0	0	6	1	42	4	1	2	21	2
Wyoming.....	0	0	0	0	0	0	0	1	89	4
Colorado ⁵	5	1	0	0	5	1	0	2	282	58
New Mexico.....	12	1	0	0	111	9	5	10	358	29
Arizona.....	25	2	0	0	25	2	4	4	304	24
Utah ²	0	0	0	0	0	0	0	0	332	33
PACIFIC										
Washington.....	28	9	0	1	28	9	2	3	85	27
Oregon.....	0	0	7	1	5	1	3	3	112	22
California.....	3	3	1	2	9	11	11	10	157	185
Total.....	1	30	60	25	22	554	642	730	171	4,181
33 weeks.....	16	12,693	7,974	5,311	10	8,145	8,185	9,248	179	144,015

¹ New York City only.

² Rocky Mountain spotted fever, week ended Aug. 20, 1938, 15 cases as follows: New Jersey, 1; Indiana, 3; Illinois, 1; Delaware, 1; Maryland, 2; District of Columbia, 1; Virginia, 2; North Carolina, 1; Kentucky, 1; Tennessee, 1; Idaho, 1.

³ Period ended earlier than Saturday.

⁴ Typhus fever, week ended Aug. 20, 1938, 67 cases as follows: North Carolina, 3; South Carolina, 4; Georgia, 27; Florida, 1; Alabama, 16; Mississippi, 2; Texas, 14.

⁵ Colorado tick fever, week ended Aug. 20, 1938: Colorado, 2 cases.

SUMMARY OF MONTHLY REPORTS FROM STATES

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

State	Menin- gitis, menin- gococ- cus	Diph- theria	Influ- enza	Ma- laria	Mea- sles	Pel- lagra	Polo- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
<i>July 1938</i>										
Florida	2	28	9	22	95	11	5	13	0	11
Idaho	2	6	9	27	38		0	11	25	11
Illinois	6	103	27	27	407		9	401	44	63
Maine	0	7	18		134		2	43	0	8
Michigan	5	32		8	1,949		11	448	8	9
Minnesota	1	21	11		439		1	131	89	5
Missouri	6	31	35	67	85	3	3	88	50	59
Ohio	1	66	20	3	534	2	8	258	3	44
Oregon	0	8	62	2	75		1	56	50	6
Tennessee	6	32	49	208	135	46	6	46	3	152
Texas	3	95	419	926		280	6	162		322

July 1938

Cases	Cases	Cases	Cases
Actinomycosis:		Lead poisoning:	
Illinois	1	Ohio	2
Chickenpox:		Leprosy:	
Florida	15	Michigan	1
Idaho	15	Lymphogranuloma:	
Illinois	263	Illinois	8
Maine	101	Tennessee	1
Michigan	439	Mumps:	
Minnesota	112	Florida	15
Missouri	43	Idaho	12
Ohio	330	Illinois	288
Oregon	67	Maine	43
Tennessee	15	Michigan	203
Conjunctivitis:		Missouri	47
Idaho	2	Ohio	269
Diarrhea and enteritis (un- der 2 years):		Oregon	56
Ohio	352	Tennessee	67
Dysentery:		Ophthalmia neonatorum:	
Florida (amoebic)	2	Missouri	1
Florida (bacillary)	2	Ohio	62
Illinois (amoebic)	8	Tennessee	9
Illinois (bacillary)	29	Paratyphoid fever:	
Illinois (amoebic carriers)	18	Idaho	3
Michigan (amoebic)	3	Illinois	4
Michigan (bacillary)	6	Michigan	3
Minnesota (amoebic)	1	Minnesota	1
Missouri (amoebic)	46	Ohio	3
Ohio (bacillary)	8	Tennessee	12
Oregon (amoebic)	1	Texas	8
Tennessee (amoebic)	3	Puerperal septicemia:	
Tennessee (bacillary)	143	Ohio	1
Encephalitis, epidemic or lethargic:		Tennessee	4
Illinois	4	Rabies in animals:	
Maine	1	Florida	4
Michigan	3	Illinois	37
Missouri	1	Minnesota	15
Ohio	1	Missouri	11
Texas	5	Oregon	6
German measles:		Rabies in man:	
Idaho	4	Illinois	1
Illinois	11	Michigan	1
Maine	11	Rocky Mountain spotted fever:	
Michigan	56	Idaho	10
Ohio	7	Illinois	8
Granuloma, inguinale:		Minnesota	1
Tennessee	1	Oregon	3
Hookworm disease:		Tennessee	4
Florida	390	Scabies:	
Impetigo contagiosa:		Oregon	14
Illinois	17	Septic sore throat:	
Oregon	34	Florida	3
Tennessee	8	Idaho	2
Jaundice:		Illinois	3
Michigan	2	Michigan	9
Oregon	3	Minnesota	14
		Missouri	31
		Septic sore throat—Con.	
		Ohio	42
		Oregon	14
		Tennessee	10
		Tetanus:	
		Florida	3
		Illinois	2
		Michigan	3
		Minnesota	1
		Missouri	2
		Tennessee	6
		Trachoma:	
		Illinois	197
		Michigan	1
		Minnesota	2
		Missouri	31
		Oregon	1
		Tennessee	4
		Tularaemia:	
		Idaho	1
		Illinois	4
		Minnesota	4
		Missouri	2
		Ohio	1
		Tennessee	2
		Typhus fever:	
		Florida	17
		Tennessee	1
		Undulant fever:	
		Florida	7
		Idaho	1
		Illinois	30
		Maine	3
		Michigan	17
		Minnesota	11
		Missouri	3
		Ohio	4
		Oregon	1
		Tennessee	5
		Vincent's infection:	
		Florida	26
		Illinois	5
		Maine	8
		Michigan	16
		Oregon	9
		Tennessee	8
		Whooping cough:	
		Florida	86
		Idaho	17
		Illinois	1,770
		Maine	138
		Michigan	1,783
		Minnesota	220
		Missouri	176
		Ohio	967
		Oregon	153
		Tennessee	266

PLAGUE INFECTION IN CALIFORNIA AND WYOMING

IN GROUND SQUIRREL AND FLEAS FROM GROUND SQUIRRELS IN SAN BERNARDINO COUNTY, CALIF.

Under date of August 17, 1938, Doctor W. M. Dickie, State Director of Health of California, reported plague infection proved in one *fisheri* squirrel and in a pool of 100 fleas from 15 *fisheri* squirrels collected August 4, nine miles east of Mentone, San Bernardino, County.

IN POOLS OF TICKS, FLEAS, AND LICE FROM GROUND SQUIRRELS IN LINCOLN AND SUBLETTE COUNTIES, WYOMING

Under date of August 17, 1938, Senior Surgeon C. R. Eskey reported plague infection in pools of ticks, fleas, and lice from ground squirrels (*Citellus armatus* and *Citellus elegans*) in Wyoming as follows:

Lincoln County.—15 ticks from 20 *C. armatus* shot July 22, 6 miles northeast of Cokeville; 87 fleas from 36 *C. elegans* shot July 28, 2 to 4 miles northwest of Sage; 57 fleas from 16 *C. armatus* shot July 30, 3 miles southeast of Kemmerer; 49 fleas and 4 lice from 19 *C. armatus* shot August 2, ¼ to ½ mile north of Kemmerer; 66 fleas and 2 lice from 34 *C. elegans* shot August 2, 8 to 10 miles northeast of Kemmerer; and 21 fleas and 7 lice from 4 *C. armatus* shot August 3, 8 miles northeast of Kemmerer.

Sublette County.—110 fleas from 52 *C. elegans* shot July 28, 1 mile south of Big Piney.

WEEKLY REPORTS FROM CITIES

City reports for week ended Aug. 13, 1938

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Data for 90 cities:											
5-year average	98	37	12	354	285	267	4	363	95	1,256	-----
Current week	84	23	11	266	281	204	5	302	67	1,975	-----
Maine:											
Portland	0	-----	0	0	0	0	0	2	0	0	20
New Hampshire:											
Concord	0	-----	0	0	2	0	0	0	0	0	5
Manchester	0	-----	0	0	0	0	0	1	0	0	23
Nashua	0	-----	0	0	0	0	0	0	0	1	10
Vermont:											
Barre	0	-----	0	0	0	0	0	1	0	0	3
Burlington	0	-----	0	0	0	0	0	0	0	1	8
Rutland	0	-----	0	0	0	0	0	0	0	0	6
Massachusetts:											
Boston	0	-----	0	14	12	2	0	8	0	24	191
Fall River	0	-----	0	2	0	1	0	2	0	1	34
Springfield	0	-----	0	3	0	1	0	0	0	4	34
Worcester	0	-----	0	0	4	1	0	1	0	0	35
Rhode Island:											
Pawtucket	0	-----	0	0	0	0	0	0	0	0	15
Providence	0	-----	0	0	5	3	0	0	0	30	55
Connecticut:											
Bridgeport	0	-----	0	0	0	1	0	1	0	0	30
Hartford	0	-----	0	0	4	1	0	1	0	3	-----
New Haven	0	-----	0	1	1	0	0	0	0	12	24

¹ Figures for Little Rock, Ark., estimated; report not received.

City reports for week ended Aug. 13, 1938—Continued

State and city	Diph- theria cases	Influenza		Mea- sles cases	Pne- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
New York:											
Buffalo.....	0		0	0	5	4	0	6	0	30	102
New York.....	8		3	64	45	19	0	64	22	375	1,217
Rochester.....	0		0	14	1	0	0	1	1	34	50
Syracuse.....	0		0	9	1	2	0	1	0	17	38
New Jersey:											
Camden.....	0		0	0	2	1	0	1	0	1	34
Newark.....	0		0	4	3	0	0	4	0	75	93
Trenton.....	0		0	2	1	0	0	1	0	2	18
Pennsylvania:											
Philadelphia.....	2		1	12	15	2	0	21	3	100	426
Pittsburgh.....	2	1	1	0	8	2	0	3	0	29	130
Reading.....	2		0	2	0	0	0	0	0	2	19
Scranton.....	0			0		1			0		
Ohio:											
Cincinnati.....	2		0	0	4	4	0	8	1	24	119
Cleveland.....	2	2	0	11	5	5	0	11	0	101	167
Columbus.....	1		0	0	1	4	0	4	0	0	80
Toledo.....	0		1	1	1	0	0	4	0	9	74
Indiana:											
Anderson.....	0		0	0	0	1	0	0	0	0	7
Fort Wayne.....	0		0	0	0	0	0	1	0	0	18
Indianapolis.....	0		1	8	9	2	4	1	1	1	100
Muncie.....	0		0	0	2	3	1	0	0	0	8
South Bend.....	0		0	1	1	1	0	0	0	2	19
Terre Haute.....	4		0	0	0	0	0	0	0	0	26
Illinois:											
Alton.....	0		0	0	0	0	0	0	0	0	17
Chicago.....	8	1	0	15	15	40	0	30	3	381	595
Elgin.....	0		0	0	0	0	0	0	0	2	5
Moline.....	0		0	0	0	0	0	0	0	0	5
Springfield.....	0		0	0	1	1	0	0	0	1	21
Michigan:											
Detroit.....	5		0	8	5	11	0	12	4	181	212
Flint.....	0		0	4	0	10	0	0	0	10	30
Grand Rapids.....	0		0	6	0	3	0	0	0	1	19
Wisconsin:											
Kenosha.....	0		0	1	0	0	0	0	0	7	6
Madison.....	0		0	3	0	0	0	0	0	3	4
Milwaukee.....	0		0	3	2	5	0	2	0	158	89
Racine.....	0		0	0	0	0	0	2	0	20	10
Superior.....	0		0	1	0	0	0	0	0	3	10
Minnesota:											
Duluth.....	0		0	5	1	2	0	0	0	28	27
Minneapolis.....	1		0	8	2	4	0	0	0	16	88
St. Paul.....	0	1	1	2	2	1	0	1	0	23	54
Iowa:											
Cedar Rapids.....	0			0		0	0		0	5	
Davenport.....	0			0		0	0		0	0	
Des Moines.....	0		0	1	0	0	2	0	2	0	26
Sioux City.....	0			1		1	0		0	6	
Waterloo.....	2			0		0	0		0	1	
Missouri:											
Kansas City.....	1		0	1	6	2	0	3	1	1	71
St. Joseph.....	0		0	0	3	0	0	0	0	0	33
St. Louis.....	2		0	2	3	2	0	6	5	4	205
North Dakota:											
Fargo.....	0		0	0	1	2	0	0	0	0	12
Grand Forks.....	0			0		1	0		0	0	
Minot.....	0			2		0	1		0	1	
South Dakota:											
Aberdeen.....	0			0		0	0		1	1	
Nebraska:											
Lincoln.....	0		0	0	0	1	0	0	0	12	18
Omaha.....	0		0	1	3	1	0	2	0	0	55
Kansas:											
Lawrence.....	0		0	0	0	0	0	0	0	1	1
Topeka.....	0		0	0	3	0	0	0	0	5	21
Wichita.....	0		0	1	2	1	0	2	0	8	31
Delaware:											
Wilmington.....	0		0	0	0	0	0	1	0	3	22
Maryland:											
Baltimore.....	1	4	1	5	12	5	0	6	4	30	202
Cumberland.....	0		0	0	0	0	0	2	0	2	15
Frederick.....	0		0	0	0	0	0	1	0	0	3

City reports for week ended Aug. 13, 1938—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
District of Columbia:											
Washington.....	3		0	3	4	2	0	8	3	11	113
Virginia:											
Lynchburg.....	3		0	1	1	0	0	0	0	2	12
Norfolk.....	0		0	4	0	0	0	1	0	0	29
Richmond.....	0		0	2	2	0	0	2	0	1	43
Roanoke.....	1		0	0	0	0	0	0	0	2	16
West Virginia:											
Charleston.....	0		0	0	0	0	0	0	2	0	8
Huntington.....	0		0	0	0	0	0		3	0	
Wheeling.....	0		0	1	1	0	0	1	0	0	24
North Carolina:											
Gastonia.....	1		0	0		0	0	0		1	
Raleigh.....	0		0	0	1	0	0	0	1	10	9
Wilmington.....	0		0	0	0	0	0	0	0	2	6
Winston-Salem.....	0		0	7	0	2	0	1	0	0	25
South Carolina:											
Charleston.....	0		0	0	3	0	0	1	0	0	24
Florence.....	0		0	0	1	0	0	0	0	0	13
Greenville.....	0		0	1	0	0	0	2	0	2	19
Georgia:											
Atlanta.....	3	7	0	0	5	5	0	3	0	13	78
Brunswick.....	0		1	0	0	0	0	0	0	3	3
Savannah.....	3		0	0	0	2	0	1	1	0	30
Florida:											
Miami.....	0	1	1	0	4	0	0	1	0	4	28
Tampa.....	2		0	1	1	1	0	1	0	7	20
Kentucky:											
Ashland.....	0		0	0		0	0		1	0	
Covington.....	0		0	0	0	0	0	0	0	3	9
Lexington.....	1		0	1	1	0	0	1	0	0	19
Louisville.....	1		0	2	2	0	0	0	1	5	59
Tennessee:											
Memphis.....	0		0	0	0	3	0	7	3	4	100
Nashville.....	0		0	2	0	3	0	1	0	7	41
Alabama:											
Birmingham.....	1	5	0	0	1	0	0	5	3	2	67
Mobile.....	1		0	0	1	0	0	1	0	0	26
Montgomery.....	0		0	0	0	0	0	0	0	0	
Arkansas:											
Fort Smith.....	0			1		1	0		0	0	
Little Rock.....											
Louisiana:											
Lake Charles.....	0		0	0		0	0		0	0	8
New Orleans.....	8		0	1	16	2	0	3	0	35	137
Shreveport.....	0		0	0	4	1	0	1	0	0	29
Oklahoma:											
Oklahoma City.....	0		0	0	5	1	0	1	0	0	50
Tulsa.....	0		0	0	0	0	0	0	1	4	1
Texas:											
Dallas.....	3		0	0	1	6	0	3	1	4	61
Fort Worth.....	0		0	0	1	0	0	0	0	7	34
Galveston.....	0		0	0	1	0	0	1	0	0	15
Houston.....	2		0	1	5	4	0	9	4	2	72
San Antonio.....	0		0	0	3	2	0	2	0	3	61
Montana:											
Billings.....	0		0	0	1	0	0	0	0	0	4
Great Falls.....	0		0	0	2	0	0	0	0	6	9
Helena.....	0		0	0	0	0	0	0	0	0	2
Missoula.....	0		0	0	0	0	0	1	0	0	6
Idaho:											
Boise.....	0		0	0	1	0	0	1	0	0	10
Colorado:											
Colorado Springs.....	0		0	1	0	1	0	3	0	9	11
Denver.....	9		0	3	5	3	0	3	0	21	87
Fueblo.....	0		1	1	0	1	0	2	0	10	19
New Mexico:											
Albuquerque.....	0		0	0	0	0	0	4	0	0	7
Utah:											
Salt Lake City.....	0		1	7	2	0	0	2	0	16	32
Washington:											
Seattle.....	0		0	5	3	1	0	2	2	8	86
Spokane.....	1		0	1	1	0	0	0	1	0	24
Tacoma.....	0		0	0	3	2	1	1	0	0	29

City reports for week ended Aug. 13, 1938—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Oregon:											
Portland.....	0	3	0	5	2	3	0	5	0	0	70
Salem.....	0	2	-----	1	-----	1	1	-----	0	0	-----
California:											
Los Angeles.....	3	2	0	14	11	15	0	19	1	32	354
Sacramento.....	0	-----	0	3	2	0	0	3	0	11	25
San Francisco.....	0	-----	0	3	3	3	0	3	0	14	146

State and city	Meningitis, meningococcus		Polio-myelitis cases	State and city	Meningitis, meningococcus		Polio-myelitis cases
	Cases	Deaths			Cases	Deaths	
New York:				Maryland:			
Buffalo.....	2	0	1	Frederick.....	0	1	1
New York.....	2	1	3	District of Columbia:			
New Jersey:				Washington.....	1	0	2
Newark.....	0	0	1	Kentucky:			
Pennsylvania:				Louisville.....	1	0	0
Philadelphia.....	2	0	3	Tennessee:			
Pittsburgh.....	0	0	3	Memphis.....	0	1	0
Indiana:				Louisiana:			
Indianapolis.....	1	0	0	New Orleans.....	2	1	0
Illinois:				Oklahoma:			
Alton.....	0	0	2	Tulsa.....	0	0	1
Chicago.....	1	0	3	Texas:			
Wisconsin:				Houston.....	1	0	0
Superior.....	0	0	1	California:			
Minnesota:				San Francisco.....	1	0	0
Duluth.....	0	0	2				
North Dakota:							
Grand Forks.....	1	1	0				

Encephalitis, epidemic or lethargic.—Cases: New York, 1; Omaha, 1; Memphis, 1.

Pellagra.—Cases: Boston, 1; Baltimore, 1; Charleston, S. C., 1; Atlanta, 6; Savannah, 4; Nashville, 1; Birmingham, 1; Montgomery, 1; New Orleans, 1; San Antonio, 1; Los Angeles, 1.

Typhus fever.—Cases: Wilmington, N. C., 1; Charleston, S. C., 4; Savannah, 4; Houston, 1.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—2 weeks ended July 30, 1938.—During the 2 weeks ended July 30, 1938, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia ¹	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis				1	2		1			4
Chickenpox		11	3	64	153	47	24	7	61	370
Diphtheria		8	3	93	8	8				120
Dysentery					5				7	12
Erysipelas				8	4					12
Influenza		7			3				18	28
Lethargic encephalitis				1						1
Measles		9	3	94	237	3	5	1	50	402
Mumps					30	18	2	21		71
Paratyphoid fever									1	1
Pneumonia					8				7	15
Poliomyelitis				2	17	6	2	16	6	49
Scarlet fever		11	8	176	76	21	23	15	17	347
Trachoma									5	5
Tuberculosis	8	21	74	128	87			6	31	355
Typhoid fever		3	6	34	5	2	4	4	4	62
Undulant fever				1	6				1	8
Whooping cough		5	3	160	281	20	7	3	179	658

¹ For 2 weeks ended Aug. 3, 1938.

CHINA

Typhoid fever.—Under date of August 11, 1938, the American Consul General at Shanghai, China, reported 116 cases of typhoid fever with 48 deaths for the week ended August 6, 1938, in Shanghai and outlying areas, and under date of August 17, 1938, there were reported 129 new cases of typhoid fever with 65 deaths in the same locality, for the week ended August 13, 1938.

CUBA

Notifiable diseases—Year 1937.—During the year 1937, cases of certain notifiable diseases were reported in Cuba as follows:

Disease	Cases	Cases per 1,000 population	Disease	Cases	Cases per 1,000 population
Cancer	172	0.04	Measles	365	0.08
Diphtheria	167	.06	Poliomyelitis	67	.01
Frambesia	74	.01	Smallpox	145	.03
Hydrophobia	77	.01	Trachoma	57	.01
Leprosy	109	.02	Tuberculosis (pulmonary)	3,066	.73
Malaria	8,270	1.98	Typhoid fever	2,323	.55

Population of Cuba Dec. 31, 1937, 4,164,996.

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

NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for August 26, 1938, pages 1544-1558. A similar cumulative table will appear in future issues of the PUBLIC HEALTH REPORTS for the last Friday of each month.

Cholera

China.—Cholera has been reported in China as follows: Week ended August 6, 1938—Canton, 2 cases; Hong Kong, 30 cases; Macao, 29 cases; Shanghai, 1,265 cases; Swatow, 8 cases; week ended August 13, 1938—Canton, 2 cases; Hong Kong, 39 cases; Macao, 62 cases; Shanghai, 1,066 cases; Swatow, 5 cases. Cholera has also been reported in Tsingtao. (The American Consul General at Shanghai reported under date of August 11, 1938, that for the week ended August 6, 1938, there had been reported 1,564 cases of cholera, with 230 deaths in Shanghai and outlying areas, 84 percent of which cases were said to be true cholera, and also under date of August 17, 1938, there were reported from the same source for the week ended August 13, 1938, 1,269 new cases of cholera with 277 deaths, of which cases 84 percent were said to be true cholera.)

India—Bombay.—During the week ended August 6, 1938, 3 cases of cholera with 1 death were reported in Bombay, India.

Indochina (French).—Cholera has been reported in French Indochina as follows: Week ended August 6, 1938, 151 deaths in Annam Province; week ended August 13, 1938, Annam Province, 161 cases; Tonkin Province, 15 cases; Hanoi, 1 case.

Plague

Brazil—Ceara State.—During the month of May 1938, 1 case of plague was reported in Ceara State, Brazil.

Indochina (French)—Pnom Penh.—During the week ended August 6, 1938, 1 case of plague was reported in Pnom Penh, French Indochina.

United States.—A report of plague infection in San Bernardino County, California, and in Lincoln and Sublette Counties, Wyoming, appears on page 1585 of this issue of PUBLIC HEALTH REPORTS.

Smallpox

Mexico.—During the month of April 1938, smallpox was reported in Mexico as follows: Aguascalientes, Aguascalientes State, 12 cases, 1 death; Campeche State, 2 cases; Guerrero State, 1 case; Hidalgo State, 7 cases; Mexico State, 1 case; Mexico, D. F., 5 cases; Michoacan State, 4 cases; Monterrey, Nuevo Leon State, 2 cases; Queretaro State, 3 cases; San Luis Potosi, San Luis Potosi State, 1 case.

Typhus Fever

Mexico.—During the month of April 1938, typhus fever was reported in Mexico as follows: Aguascalientes, Aguascalientes State, 2 cases; Guanajuato State, 4 cases, 1 death; Hidalgo State, 2 cases; Lower California, 1 death; Mexico, D. F., 32 cases, 7 deaths; Oaxaca State, 1 case; Queretaro State, 2 cases; San Luis Potosi, San Luis Potosi State, 2 cases; Zacatecas State, 4 cases.

Yellow Fever

Colombia—Cundinamarca Department—Medina.—On June 26, 1938, 1 death from yellow fever was reported in Medina, Cundinamarca Department, Colombia.

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