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INCIDENCE AND CLINICAL SYMPTOMS OF MINOR RESPIRATORY ATTACKS WITH SPECIAL REFERENCE TO VARIATION WITH AGE, SEX, AND SEASON[1]

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Data on minor respiratory illnesses in a group of families of medical officers of the United States Army, Navy, and Public Health Service and the faculty members of certain universities were collected by the Public Health Service under the direction of Surg. J. G. Townsend for a period of 33 months from October 1923 to June 1926, inclusive. These officers were stationed at various places throughout the country, with some representation from nearly every State (2). For a shorter period, reports were received from a group of college students in various universities in the United States.

The method of collecting the data has been described in previous reports (1), (2), (3) but may be briefly summarized: Medical officers who signified their willingness to report respiratory attacks in their families made out an enrollment record for each member of the family, including such essential information as sex, date of birth, and whether the person suffered from any of a group of chronic respiratory diseases that were listed on the form. After enrollment a schedule for reporting attacks of respiratory illness was sent to the officer at semimonthly intervals. The data for the students were collected in the same way, except that each student reported upon himself or herself only. The description of the attack by the reporter included, among other things, the patient's or informant's statement of the diagnosis in terms of the following clinical classes or combinations of those classes:

Cold (includes "cold in head" or "nose cold")
Bronchitis (includes cold in chest with cough)
Sore throat (includes tonsillitis and pharyngitis)
Influenza (includes "grippe" or "flu")
Pneumonia (only if so diagnosed by physician)

Hay fever ("pollen fever" or "rose cold") was also on the schedule but is not included in the total or any subgroup of respiratory diseases in this paper, being reserved for a separate note.

Along with the reported diagnosis was a statement of the symptoms present during the attack, a list of 13 conditions being printed on

[1] From the Office of Statistical Investigations, United States Public Health Service.

the form with a space to check those that appeared at any time during the attack. The present study deals almost entirely with the first four diagnostic groups ordinarily designated as minor respiratory diseases, but the relatively few cases of pneumonia and other serious respiratory conditions are included in the total cases.

The report is based on (*a*) records for a 33-month period for the families of medical officers, and (*b*) records for 1924 for students who reported for all 24 half-months of the calendar year in the seven universities with the largest numbers under observation.

A description of the forms used and an analysis of certain phases of the data have appeared in earlier publications (1), (2), (3). This report considers the frequency of certain symptoms accompanying the attacks (*a*) of the four minor respiratory diagnostic groups (*b*), in different age and sex groups, and (*c*) in different months of the 33-month period. Incidental to this analysis of symptoms, data are presented on age, sex, and chronological variation in the incidence of the different clinical classes of respiratory conditions.

The symptoms which the patient or the informant was asked to check as present or not present during an illness were those that commonly accompany minor respiratory attacks; they are listed in table 1. Some of them were reported rather infrequently, and in certain instances, such as running nose and obstruction of the nostrils, approximately the same physical status is described by both conditions. Data on each of the 13 symptoms, however, have been tabulated.

The frequency with which the various manifestations of the attacks occurred has been expressed as the percentage of cases in which the symptom was checked as present. In considering symptoms, attacks with none of the 13 symptoms checked as present were eliminated as unknown,[2] but in considering case incidence all cases were used.

FREQUENCY AND SYMPTOMS OF CERTAIN CLINICAL DIAGNOSES

The minor respiratory conditions reported were grouped into the four classes enumerated above that might be given the short titles of

[2] Throughout the student observations and in the first 23 months of the family study the number of cases was negligible in which none of the 13 symptoms was checked as present, averaging 6 percent. In September of 1925, after reports from the students had been discontinued, new forms were adopted in which the persons under observation and the occurrence of cases were reported on one sheet and the symptoms on another. Many of these symptom reports were never received for cases whose occurrence was reported. In the last 10 months of the study, when this plan was used, 34 percent of the cases are unknown as to symptoms present. The unknowns were eliminated from the symptom tabulations throughout the study, both before and after the change in forms. Even with this procedure there are evidences of some incompleteness in symptom reports. All cases reported under the diagnosis of sore throat should obviously have had sore throat checked as a symptom; but even when illnesses with unknown symptoms are subtracted from the total, the percentage of cases of sore throat that had "sore throat" checked as a symptom is only 87 in the families and about the same in the student group. Similarly, "cough" was not always checked in cases reported as bronchitis nor "running nose" in cases of coryza or head cold. On the whole, however, the report of symptoms seems reasonably complete.

coryza, bronchitis, sore throat, and influenza. However, many attacks were reported as including two or more of these diagnoses, such as coryza and bronchitis, bronchitis and sore throat, etc. To classify cases with two or more diagnoses into the four classes it would be necessary to set up some arbitrary rules for their allocation; for the present report on symptoms it seemed more desirable to deal with cases reported under a single diagnosis, and, accordingly, illnesses with two or more diagnoses were put in a separate class. An exception was made for influenza and pneumonia reports, the case being so classified regardless of accompanying diagnoses. Hay fever was eliminated from the total and from all classes of respiratory cases considered in this study.

The reported diagnoses might have been further corrected or refined according to the symptoms checked as present in the attack. For example, many cases reported simply as cold in the head had sore throat indicated as a symptom and might well have been put in the class of coryza and sore throat instead of coryza only. For this paper, however, the reporter's diagnosis was accepted as final for two reasons: (*a*) In the families the informants were nearly all physicians, and (*b*) it was desired to examine the nature of minor respiratory attacks commonly designated by these four names.

In the families of medical officers during the 33-month period ending June 30, 1926, there was an average annual incidence of 1,851 respiratory cases per 1,000 persons under observation, or nearly 2 attacks per person per year. Of this total, about half (918 per 1,000) were reported as coryza or head colds. Nearly one-fourth (447 per 1,000) were combinations of two or more diagnoses.[3] The other one fourth of the cases were reported as influenza (235 per 1,000), sore throat (136 per 1,000) and bronchitis (115 per 1,000).

The annual incidence of respiratory attacks among the students was 80 percent higher than in the family group, being 3,333 per 1,000, or more than three colds per person per year. While these rates are not for the same time period, there is reason to believe that the difference is due largely to the circumstances that the students reported upon themselves only and remembered more trivial attacks than did

[3] Of this "all other" class of attacks, there were the following:

	Number of cases	Annual rate per 1,000	Percent of cases
Total for this class	3,683	446.7	100.0
Coryza and bronchitis	1,673	202.9	45.4
Coryza and sore throat	1,212	147.0	32.9
Coryza and bronchitis and sore throat	465	56.4	12.6
Bronchitis and sore throat	140	17.0	3.8
Sinusitis alone or with other diagnoses	123	14.9	3.4
Pneumonia (all forms)	51	6.2	1.4
All other	19	2.3	.5

the household head who reported upon the whole family. Also the students used in this paper were exceptionally conscientious reporters, for they include only those who submitted a record for every half month in 1924 whether in school or on vacation.

The student rate of 3,333 respiratory cases per 1,000 approximates closely rates found for 3 consecutive years (3,340, 3,200, and 2,980 per 1,000) by Doull, Herman, and Gafafer (4) for Johns Hopkins medical students. The respiratory rate for 2 consecutive years (3,175, 3,072 per 1,000) found by Van Volkenburgh and Frost (5) for a group of Baltimore families kept under close observation approximates the student rate in this study (3,333 per 1,000) much more closely than the family rate (1,851 per 1,000).[4]

More of the students' illnesses were reported simply as coryza or head colds than in the case of the medical officers' families—2,389 per 1,000, or 72 percent of the total respiratory cases. About 15 percent of the attacks (507 per 1,000) were combinations of the several diagnoses, and the remaining 13 percent consisted of sore throat (180 per 1,000), bronchitis (141 per 1,000), and influenza (116 per 1,000).

TABLE 1.—*Frequency of certain symptoms in specific respiratory conditions*

Symptoms	Percent of cases with the specified symptom									
	Medical officers' families, October 1923–June 1926					Students, calendar year 1924				
	All respiratory	Coryza *	Bronchitis *	Sore throat *	Influenza *	All respiratory	Coryza *	Bronchitis *	Sore throat *	Influenza
	Both sexes									
Fever	32	16	38	45	88	16	10	17	29	75
Aching in body	27	16	18	29	71	21	15	25	25	77
Headache	29	21	19	34	60	36	33	30	32	66
Chill or chilliness	11	6	11	13	31	19	16	19	18	59
Constipation	15	11	16	17	26	19	17	14	18	41
Sudden onset	46	42	43	49	61	46	46	40	42	55
Cough	52	35	97	31	66	40	31	90	23	45
Tightness in chest	17	6	44	7	34	14	7	55	5	26
Expectoration	25	14	47	16	34	36	31	44	26	39
Sore throat	32	16	14	87	41	38	26	28	86	54
Running nose	74	87	37	19	59	75	82	33	15	57
Obstruction of nostrils	47	51	21	14	43	55	57	29	15	46
Inflammation of eyes	15	15	9	6	23	16	15	10	9	29
Total cases [b]	13,182	6,525	817	985	1,712	6,306	4,478	268	347	228

* Cases in which two or more respiratory diagnoses were reported are included in the total but are excluded from the specific classes, except that influenza with any other minor respiratory diagnosis was classified as influenza.

[b] Respiratory cases with none of the 13 symptoms checked as present were considered unknown for symptoms and excluded from symptom tabulations but included in incidence tabulations. For students this table includes a few cases under 16 and a few over 34 years of age that are not included in tables 3 and 4.

[4] The figure for families of 1,851 per 1,000 is an *annual* rate based on 33 months' experience. The 3 missing months out of a full 3-year period are July, August, and September, the months of low incidence, and so an adjustment for this fact would make the rate even less than it is. Cases with unknown week of onset are included throughout this paper but were excluded in the preceding paper on weekly incidence (3).

TABLE 1.—*Frequency of certain symptoms in specific respiratory conditions*—Con.

Symptoms	Percent of cases with the specified symptom									
	Medical officers' families, October 1923–June 1926					Students, calendar year 1924				
	All respiratory	Coryza[a]	Bronchitis[a]	Sore throat[a]	Influenza[a]	All respiratory	Coryza[a]	Bronchitis[a]	Sore throat[a]	Influenza[a]
	Male									
Fever	32	15	40	46	82	17	10	17	31	76
Aching in body	25	15	16	25	70	20	14	24	23	76
Headache	27	20	17	30	55	34	30	25	33	66
Chill or chilliness	10	5	9	11	30	18	15	21	18	61
Constipation	15	11	13	19	26	22	19	16	20	46
Sudden onset	45	40	42	50	61	46	47	39	41	55
Cough	53	36	97	31	68	41	32	91	23	45
Tightness in chest	18	6	45	6	35	14	7	56	3	29
Expectoration	29	17	51	21	38	42	37	54	30	46
Sore throat	30	16	14	86	40	37	25	28	95	58
Running nose	74	86	36	21	59	75	80	37	17	55
Obstruction of nostrils	49	51	22	17	46	61	63	34	18	49
Inflammation of eyes	15	14	8	7	24	16	14	11	9	28
Total cases[b]	6,856	3,326	444	495	879	4,176	2,920	169	207	173
	Female									
Fever	32	16	37	43	80	16	10	17	25	73
Aching in body	29	18	19	33	72	23	18	28	29	78
Headache	32	23	20	38	66	41	39	37	31	65
Chill or chilliness	12	6	12	15	32	22	19	16	19	55
Constipation	15	11	19	14	27	14	12	10	14	27
Sudden onset	47	43	43	47	60	44	46	40	43	55
Cough	50	35	96	30	64	39	31	88	24	45
Tightness in chest	17	6	44	7	34	13	7	55	6	18
Expectoration	20	10	42	11	29	23	19	27	21	16
Sore throat	33	17	14	88	42	38	29	29	74	42
Running nose	73	87	37	17	58	76	84	26	13	60
Obstruction of nostrils	44	49	21	11	39	44	49	21	11	36
Inflammation of eyes	15	15	9	5	22	18	18	9	9	33
Total cases[b]	6,326	3,199	373	490	833	2,130	1,558	99	140	55

See footnotes [a] and [b], p. 1158.

The record of the symptoms present in each attack makes possible a comparison of the general characteristics of cases that were reported in the four diagnostic groups. Table 1 contains data for the families of medical officers and for students. Figure 1 gives a general outline of the symptoms accompanying each diagnosis. The pictures for the student and the family groups are very similar; but since each student is reporting upon himself only, the data are presumably more accurate for that group, particularly for symptoms of a subjective nature. As might be expected, the outstanding symptom in attacks reported simply as coryza or head cold is a running nose, and in attacks reported as bronchitis and as sore throat the distinctive symptoms are cough and sore throat, respectively. In each of these diagnoses the other symptoms do not occur in a large proportion of the cases. The situation with respect to influenza is quite different. The outstanding symptoms in this category might be said to be fever,

aching in the body, and headache, but in addition the other symptoms are more frequently present in influenza than in other respiratory attacks.

It is a matter of interest to know whether certain symptoms occur with any greater frequency among men than among women during respiratory attacks. Many of the symptoms are of a subjective character and the best comparison is probably between men and women students, because each person reported on his or her own case

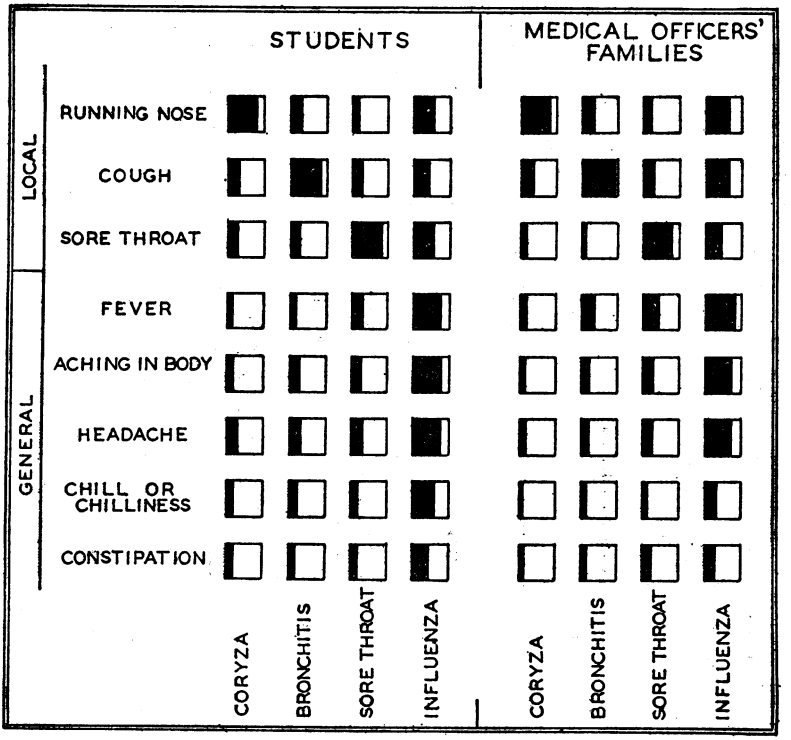

FIGURE 1.—Frequency of certain symptoms accompanying attacks of specific respiratory conditions, medical officers' families 1923–26, and students 1924. (Black=symptom reported as present; white=symptom not reported as present.)

only. In figure 2 this comparison is made. The great majority of the symptoms occur with about equal frequency in the two sexes, but the proportion of attacks having constipation, obstruction of the nostrils, and expectoration is greater among males than among females for each of the four diagnoses.

FREQUENCY AND SYMPTOMS OF ATTACKS AT DIFFERENT AGES

The age incidence of the various respiratory conditions should be considered preliminary to a study of the variation with age in the symptoms of such attacks. Table 2 and figure 3 show the age and

sex incidence of all respiratory attacks and of each of the several reported diagnoses. It does not seem necessary to go into any de-

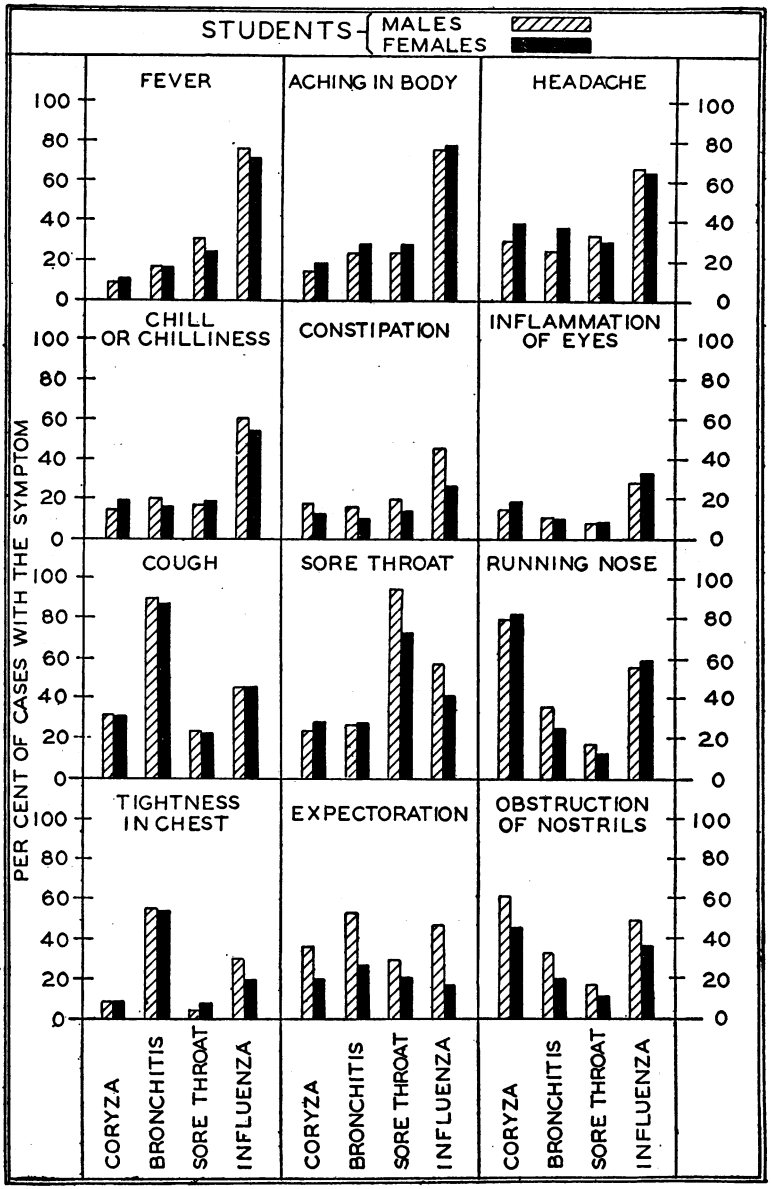

FIGURE 2.—Frequency of certain symptoms accompanying attacks of specific respiratory conditions among male and female students in seven colleges and universities, 1924.

tailed discussion of the nature of these curves. It should be noted, however, that there are rather marked differences between the various diagnoses. The influenza and bronchitis curves are unlike, and

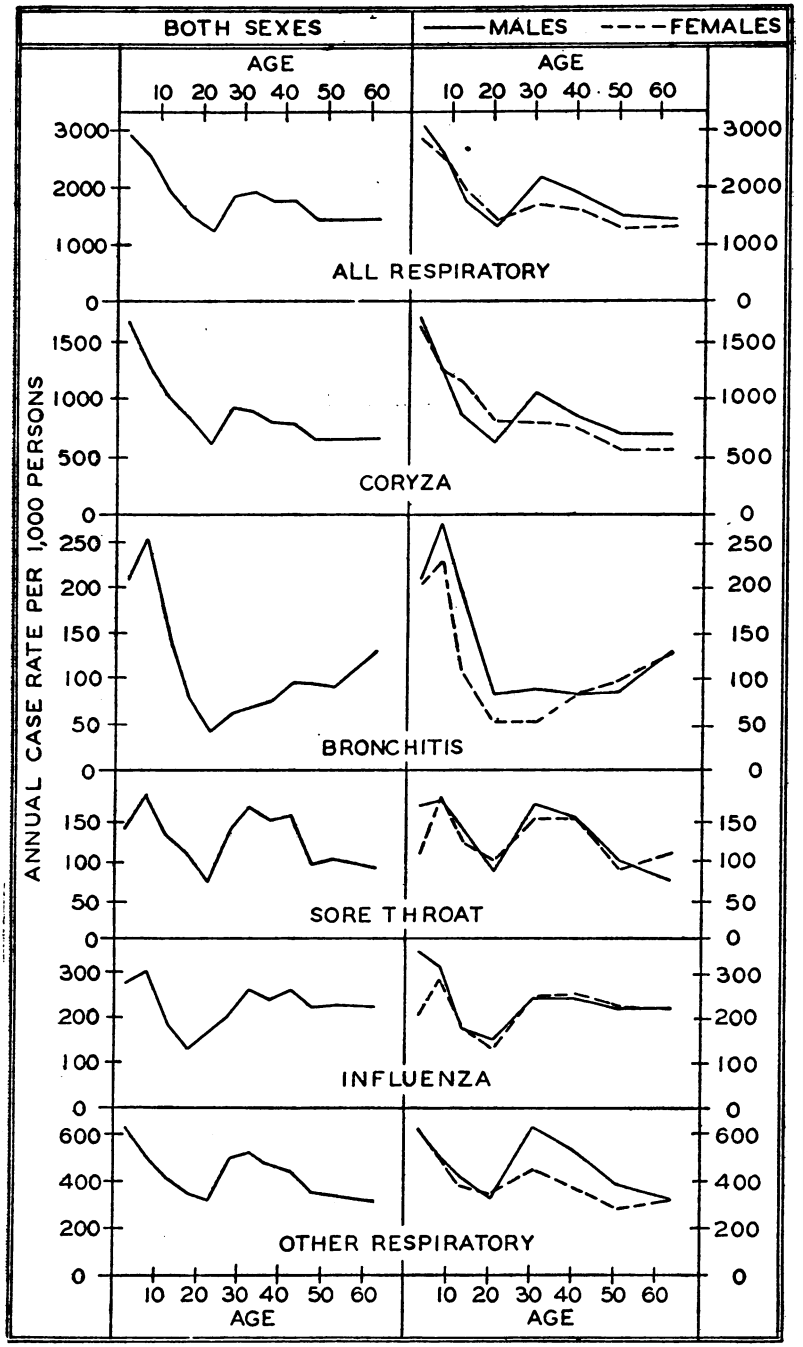

FIGURE 3.—Age and sex incidence of specific respiratory conditions among medical officers' families, 1923-1926. (Vertical scales arranged so that the rate for all ages of both sexes plots at same height from base line on each chart. "Other respiratory" is composed almost entirely of cases with two or more diagnoses.)

both are different from the curve for coryza. The age curve of sore throat resembles that of influenza in some respects, but is unlike either coryza or bronchitis.

There is one source of error in the sex incidence of these diseases. The reporter for each family was the male head of the household and the sharp rise in the rate for all respiratory attacks at the beginning of the adult ages suggests that the informant remembered his own minor illnesses better than those of the rest of the household. This assumption is strengthened by the fact that the rise is largely accounted for by coryza and the group of two or more diagnoses that is

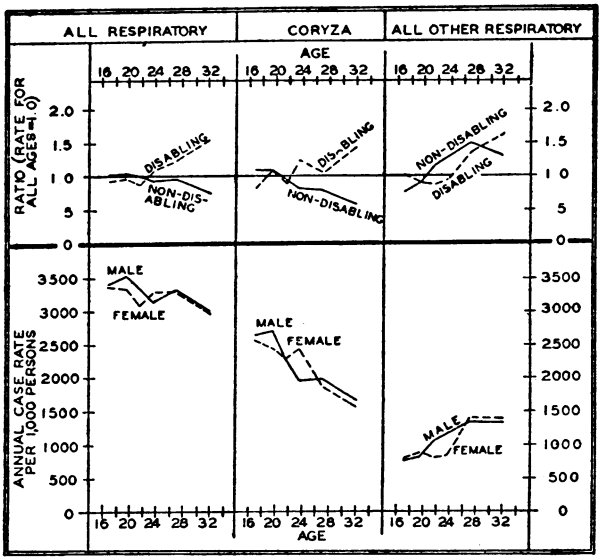

FIGURE 4.—Relative age incidence of disabling and of non-disabling respiratory cases among all students (top), and actual age incidence of all respiratory cases among male and female students (bottom), seven colleges and universities for the year 1924.

dominated by coryza. From about 25 years until the end of life the respiratory rate for males is consistently above that for females. The data for male and female students (fig. 4) indicates little or no difference between the sexes in the frequency of attacks. Van Volkenburgh and Frost (5) found higher rates for adult females than for males, but the wife was usually the reporter. Also, in the majority of other studies, including those of industrial employees where the reporting factor is eliminated, the respiratory rate seems to be higher among women than among men (6) (7).

TABLE 2.—*Age and sex incidence of specific respiratory conditions among medical officers' families during the 33-month period, October 1923–June 1926*

Age	Annual case rate per 1,000						Average number of persons under observation [3]
	All respiratory	Coryza [1]	Bronchitis [1]	Sore throat [1]	Influenza [1]	All other respiratory [2]	
	Both sexes						
All ages	1,851	918	115	133	235	447	2,998
0 to 4	2,889	1,653	204	138	274	620	308
5 to 9	2,494	1,261	248	179	301	505	280
10 to 14	1,859	998	147	132	183	399	265
15 to 19	1,449	795	75	108	129	342	135
20 to 24	1,196	601	39	72	165	319	66
25 to 29	1,799	908	58	138	202	493	169
30 to 34	1,898	881	66	169	261	521	403
35 to 39	1,710	793	71	149	236	461	363
40 to 44	1,710	766	93	156	256	439	342
45 to 49	1,384	636	91	92	218	347	252
50 to 54	1,376	627	88	99	223	339	199
55 and over	1,379	628	128	89	219	315	216
	Male						
All ages	1,934	944	127	133	241	484	1,494
0 to 4	3,030	1,690	207	169	345	619	153
5 to 9	2,530	1,270	267	177	311	505	146
10 to 14	1,768	842	187	140	179	420	130
15 to 24	1,271	627	79	88	150	327	87
25 to 34	2,178	1,054	86	171	242	625	215
35 to 44	1,834	832	81	154	240	527	362
45 to 54	1,466	685	85	98	217	381	282
55 and over	1,427	684	128	73	220	322	119
	Female						
All ages	1,769	892	104	134	229	410	1,504
0 to 4	2,750	1,616	202	108	204	620	155
5 to 9	2,453	1,251	228	182	290	502	134
10 to 14	1,947	1,147	108	124	186	382	135
15 to 24	1,439	810	51	102	134	342	114
25 to 34	1,682	789	50	153	244	446	357
35 to 44	1,579	725	82	152	252	368	343
45 to 54	1,237	544	97	90	226	280	169
55 and over	1,320	559	127	109	217	308	97

[1] Refers to cases with sole diagnosis only, except that influenza with any other minor respiratory diagnosis was classified as influenza.
[2] Composed almost entirely of cases with two or more diagnoses (see footnote 3, p. 1157 for details).
[3] After the first 4 months, when enrollment was completed, the number under observation varied relatively little from month to month. See table 7 for the average number for each month.

Data for the student group for the college ages are shown in tables 3 and 4 and figure 4. The rate for coryza in the family data distinctly declines as age increases, particularly for females who were not the reporters at any age. In the upper section of figure 4 rates for students are shown separately for disabling and nondisabling cases, the latter consisting of the attacks that did not keep the student from attending classes. The decline with age is all accounted for by the nondisabling cases; the incidence of disabling cases tends to increase with age. For respiratory conditions other than coryza, the incidence of both the disabling and nondisabling increase with age.

TABLE 3.—*Age incidence of respiratory affections among male and female college[1] students during the calendar year 1924*

Age	Annual case rate per 1,000						Number of students under observation	
	All respiratory		Coryza[2]		All other respiratory			
	Male	Female	Male	Female	Male	Female	Male	Female
All ages	3,355	3,289	2,377	2,412	979	877	1,229	643
16 to 18	3,401	3,351	2,627	2,546	773	804	357	271
19 to 20	3,518	3,327	2,702	2,449	816	879	299	214
21 to 22	3,324	3,078	2,271	2,273	1,052	805	210	77
23 to 24	3,133	3,267	1,958	2,433	1,175	833	143	30
25 to 29	3,313	3,267	1,976	1,867	1,337	1,400	166	30
30 to 34	3,000	2,952	1,667	1,571	1,333	1,381	54	21

[1] Colleges included and the numbers of students 16 to 34 years of age of each sex observed were: Harvard University, Boston (M, 218); Ohio State University, Columbus (M, 281; F, 345); Chicago University, Chicago (M, 165; F, 52); Johns Hopkins University, Baltimore (M, 156; F, 17); Georgetown University and employees of the Public Health Service, Washington (M, 112; F, 18); Tulane University, New Orleans (M, 151; F, 51); California University, Berkeley (M, 146; F, 260).
[2] Refers to cases reported with the sole diagnosis of cold in head.

TABLE 4.—*Age incidence of disabling[1] and nondisabling respiratory affections among college[2] students during the calendar year 1924*

Age	Annual case rate per 1,000									Number of students under observation
	All respiratory			Coryza[3]			All other respiratory			
	All cases[4]	Nondisabling	Disabling	All cases[4]	Nondisabling	Disabling	All cases[4]	Nondisabling	Disabling	
All ages	3,333	2,607	499	2,389	1,997	202	944	611	296	1,872
16 to 18	3,379	2,662	462	2,592	2,201	167	787	461	295	628
19 to 20	3,439	2,749	485	2,596	2,199	222	843	550	263	513
21 to 22	3,258	2,588	436	2,272	1,892	181	986	697	254	287
23 to 24	3,156	2,416	532	2,040	1,642	254	1,116	775	277	173
25 to 29	3,306	2,500	612	1,959	1,592	214	1,347	908	398	196
30 to 34	2,987	1,960	773	1,640	1,174	293	1,347	787	480	75

[1] Causing student to lose time from classes.
[2] See footnote to table 3 for colleges included.
[3] Refers to cases reported with the sole diagnosis of cold in head.
[4] "All cases" includes some that were unknown as to disability.

As already noted, the data on symptoms are set up as the percentage of attacks having the condition rather than in the form of incidence rates for cases having given symptoms. Table 5 and figure 5 show for specific age and sex groups the proportion of all respiratory attacks that had certain symptoms. In this connection it should be recalled that the men were the reporters, and so the cases for females were for all ages reported by the males, and the age curves would be less subject to distortion on account of the reporting factor.

TABLE 5.—*Frequency of certain symptoms in all respiratory affections at different ages among members of medical officers' families, October 1923–June 1926*

Age	Total cases with known symptoms[1]	Percent of cases with the specified symptom												
		Fever	Aching in body	Headache	Chill or chilliness	Constipation	Sudden onset	Cough	Tightness in chest	Expectoration	Sore throat	Running nose	Obstruction of nostrils	Inflammation of eyes
Both sexes														
All ages	13,182	32	27	29	11	15	46	52	17	25	32	74	47	15
0 to 4	2,128	36	7	7	4	15	43	59	11	10	15	83	43	18
5 to 9	1,675	39	16	19	6	15	44	64	14	16	24	70	41	12
10 to 14	1,118	33	18	27	8	11	42	50	14	17	29	74	46	12
15 to 24	626	32	31	33	12	11	51	47	15	24	33	75	48	15
25 to 34	2,661	27	35	41	13	18	46	44	18	29	42	73	50	18
35 to 44	2,900	30	36	38	13	14	48	47	21	31	38	72	51	14
45 to 54	1,391	31	38	37	15	15	51	53	23	37	34	72	49	13
55 and over	683	27	34	29	14	15	50	54	24	37	31	68	41	14
Male														
All ages	6,856	32	25	27	10	15	45	53	18	29	30	74	49	15
0 to 4	1,091	39	7	8	4	14	40	59	12	9	17	83	44	18
5 to 9	892	39	17	19	6	15	45	64	15	16	21	71	40	14
10 to 14	521	37	18	27	6	11	41	55	18	25	28	71	48	15
15 to 24	249	38	33	31	13	15	47	53	18	29	29	75	50	10
25 to 34	1,181	25	32	36	11	18	45	45	17	36	41	73	52	17
35 to 44	1,607	28	33	34	13	14	47	48	20	36	38	73	55	14
45 to 54	925	29	35	32	13	15	52	54	22	42	33	74	51	13
55 and over	390	24	30	23	13	15	47	56	22	41	25	71	43	13
Female														
All ages	6,326	32	29	32	12	15	47	50	17	20	33	73	44	15
0 to 4	1,037	34	7	7	5	16	45	59	11	10	14	84	41	18
5 to 9	783	39	15	19	7	15	43	63	13	16	27	69	42	10
10 to 14	597	30	18	27	9	11	43	47	10	11	29	76	45	10
15 to 24	377	27	30	35	11	9	53	44	13	20	35	75	47	18
25 to 34	1,480	29	38	44	15	17	47	43	19	22	42	73	48	18
35 to 44	1,293	31	39	44	14	14	49	46	21	26	39	70	46	15
45 to 54	466	35	44	47	18	16	50	50	25	26	36	68	43	13
55 and over	293	31	39	36	15	15	53	52	26	33	38	64	38	16

[1] Respiratory cases with none of the 13 symptoms checked as present were considered unknown for symptoms and excluded from symptom tabulations but included in incidence tabulations.

A few of the important variations with age and sex might be pointed out. Aching in body or limbs and headache are reported rather infrequently among children. This would obviously be true in the early ages because of the child's inability to describe his pains even though a high proportion of cases had these aches. However, the rise continues to about 30 years, or far beyond the age when there would be any difficulty in obtaining a statement of symptoms. The age curves of aching and headache are alike in other respects also and are quite different from the curve for fever, which tends to occur more frequently in children than in other ages. As fever is an objective symptom, presumably obtained in the majority of cases by

the use of a thermometer, the higher frequency in childhood appears to be real.

The proportion of cases reporting a cough is somewhat similar in age and sex variation to the incidence of bronchitis (fig. 3), being high in young children, dropping to a minimum in early adult ages, and increasing after that age. Expectoration is rarely reported

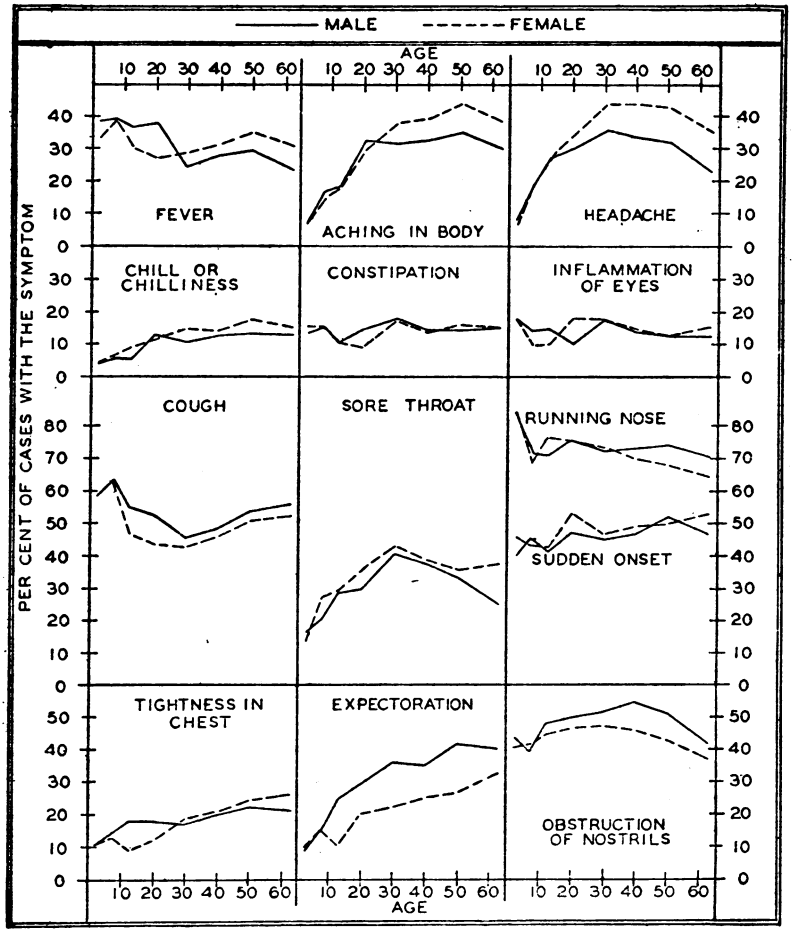

FIGURE 5.—Frequency of certain symptoms accompanying respiratory attacks in different age-sex groups, medical officers' families, 1923-26.

among children. Expectoration and tightness in the chest increase with age throughout life.

Running nose is a frequent symptom of respiratory attacks at every age, but is more frequent in childhood, tending to decline as age increases. Obstruction of the nostrils, on the other hand, is less common in attacks of children than at older ages, the frequency of the

symptom increasing up to 30 or 40 years and again declining in the older ages.

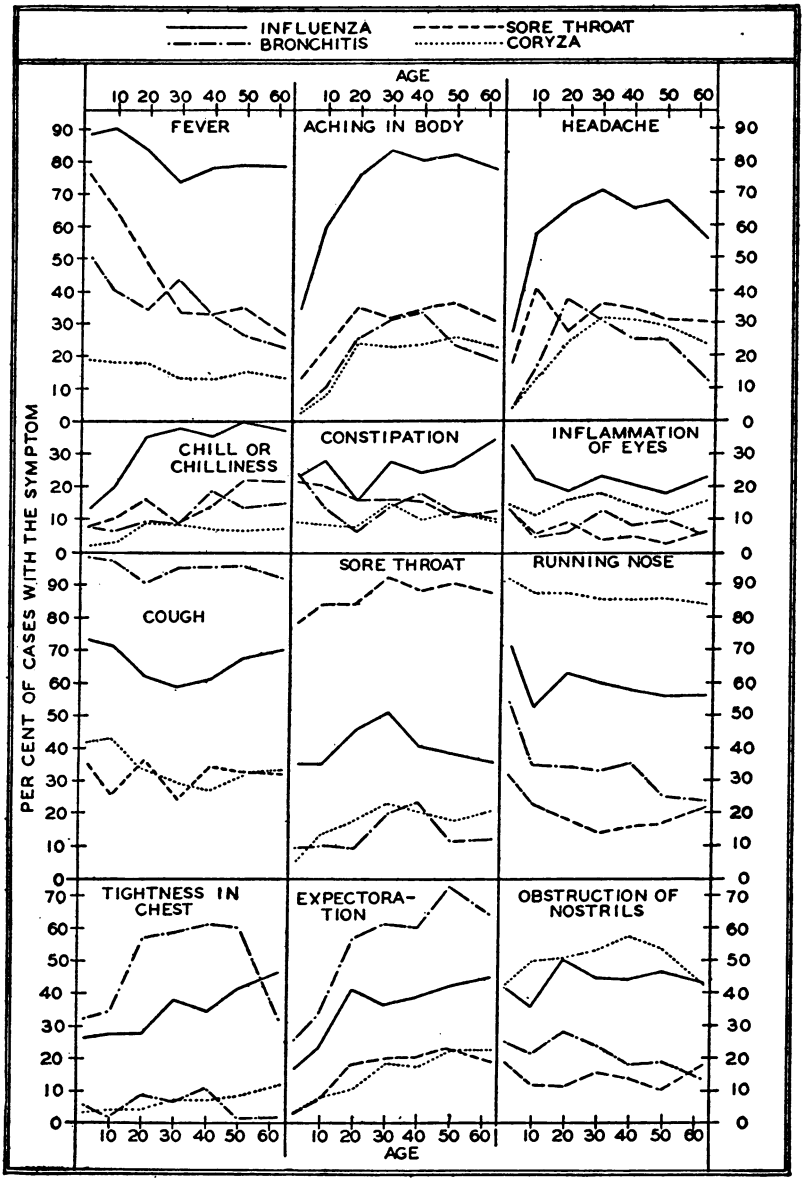

FIGURE 6.—Frequency of certain symptoms accompanying attacks of specific respiratory conditions at different ages, medical officers' families, 1923–26.

With respect to the sexes, respiratory attacks among adult women are reported as more frequently accompanied by headache, aching in body, fever, chilliness, and tightness in the chest than attacks among adult men. Sore throat is slightly higher among females almost

throughout life. On the other hand, at practically all ages expectoration, obstruction of the nostrils, and cough are more frequent among males. The other symptoms show no consistent differences between the sexes.

The designation given to the respiratory case by the patient or informant may frequently have been a choice of words rather than a real indication of the nature of the attack. However, the symptoms reported for the different diagnoses are *on the average* quite different (figs. 1 and 2), even though some cases in one class had symptoms very similar to those of another diagnostic class. It is possible that some of the age variation in the symptoms reported may be due to varying proportions of the different diagnoses that make up the total respiratory cases at the different ages. Apart from this fact, the age curves of the symptoms of specific reported diagnoses are of interest. The data are shown in table 6 and figure 6.

In considering the curves in figure 6 in comparison with symptom curves shown in figure 5, it must be remembered that nearly one fourth of the cases included in the "all respiratory" group are excluded from all four specific classes because they were reported as combinations of two or more diagnoses.

In general, the characteristics of the age curves of symptoms noted in connection with figure 5 for all respiratory conditions are true for each of the specific diagnoses. The important symptom of fever is high in childhood for each diagnosis, but the decline as age increases is particularly rapid in cases designated as sore throat. The cases reported as influenza stand out as having at every age definitely more of the general symptoms such as fever, aching in body, headache, chilliness, and constipation. Even cough, tightness in the chest, expectoration, sore throat, running nose, obstruction of the nostrils, and inflammation of the eyes occur more frequently at each age in influenza than in the other diagnoses except the ones in which the local symptom is one of the major manifestations of the attack, viz, nose symptoms with coryza, chest symptoms with bronchitis, and sore throat with cases of sore throat.

FREQUENCY AND SYMPTOMS OF ATTACKS IN DIFFERENT MONTHS

Considering in monthly intervals the incidence of the several reported diagnoses as shown in table 7 and at the top of figure 7, it may be seen that coryza is highest in the fall of the year and decreases throughout the winter and spring [5]. Influenza, on the other hand, increases to a maximum in the late winter and early spring months. Bronchitis falls between these two extremes, with a rather definite

[5] Considered in weekly intervals, respiratory disease incidence presents a series of epidemic-like peaks (apparently not chance variation) that come at such frequent intervals that they are largely averaged out in monthly data (3).

TABLE 6.—*Frequency of certain symptoms in specific respiratory conditions at different ages among members of medical officers' families, October 1923 to June 1926*

Age	Total cases with known symptoms [1]	Percent of cases with the specified symptom												
		Fever	Aching in body	Headache	Chill or chilliness	Constipation	Sudden onset	Cough	Tightness in chest	Expectoration	Sore throat	Running nose	Obstruction of nostrils	Inflammation of eyes
		Coryza [2]												
All ages	6,525	16	16	21	6	11	42	35	6	14	16	87	51	15
0 to 4	1,220	19	3	3	2	10	38	42	3	4	6	91	42	15
5 to 14	1,416	18	8	12	3	9	37	43	4	8	14	87	49	12
15 to 24	330	18	24	24	9	8	47	34	5	11	18	87	50	16
25 to 34	1,273	13	23	32	9	15	41	30	8	18	23	85	53	18
35 to 44	1,330	13	24	31	7	10	44	27	7	18	21	85	57	15
45 to 54	633	15	25	29	7	13	46	31	9	23	18	86	54	12
55 and over	323	13	23	24	7	9	49	34	12	23	21	84	42	16
		Bronchitis [2]												
All ages	817	33	18	19	11	16	43	97	44	47	14	37	21	9
0 to 4	154	51	4	4	8	24	44	99	33	26	10	54	25	14
5 to 14	260	40	10	17	7	14	39	98	35	34	10	35	22	5
15 to 24	32	34	25	38	9	6	31	91	56	56	9	34	28	6
25 to 34	87	44	31	31	9	14	47	95	59	61	20	33	24	13
35 to 44	138	33	33	25	19	18	45	96	61	59	24	36	17	9
45 to 54	80	26	24	25	14	13	44	95	60	73	11	25	19	10
55 and over	66	23	18	12	15	11	46	92	32	64	12	24	14	5
		Sore throat [2]												
All ages	985	45	29	34	13	17	49	31	7	16	87	19	14	6
0 to 4	101	76	13	18	8	22	55	36	6	4	78	32	19	13
5 to 14	201	65	22	41	10	20	61	26	3	8	84	22	12	6
15 to 24	43	49	35	28	16	16	42	37	9	19	84	19	12	9
25 to 34	239	33	31	36	9	16	42	25	7	20	92	14	16	4
35 to 44	255	33	34	35	14	15	45	35	11	20	88	16	14	5
45 to 54	100	35	36	31	22	11	50	33	2	23	90	17	10	3
55 and over	46	26	30	30	22	13	35	33	2	20	87	22	17	7
		Influenza [2]												
All ages	1,712	88	71	60	31	26	61	66	34	34	41	59	43	23
0 to 4	208	89	34	27	14	24	57	74	26	17	35	71	41	34
5 to 14	329	90	59	57	20	28	61	72	27	23	35	53	36	23
15 to 24	68	84	75	66	35	16	74	63	28	41	46	63	50	19
25 to 34	348	73	83	71	38	28	56	59	38	36	51	60	45	23
35 to 44	425	78	80	66	36	25	61	61	35	39	41	58	44	21
45 to 54	227	79	82	68	40	27	65	68	41	42	38	56	46	18
55 and over	107	79	78	56	37	35	61	70	47	45	36	56	43	23

[1] Respiratory cases with none of the 13 symptoms checked as present were considered unknown for symptoms and excluded from symptom tabulations but included in incidence tabulations.

[2] Refers to cases with sole diagnosis only, except that influenza with any other minor respiratory diagnosis was classified as influenza.

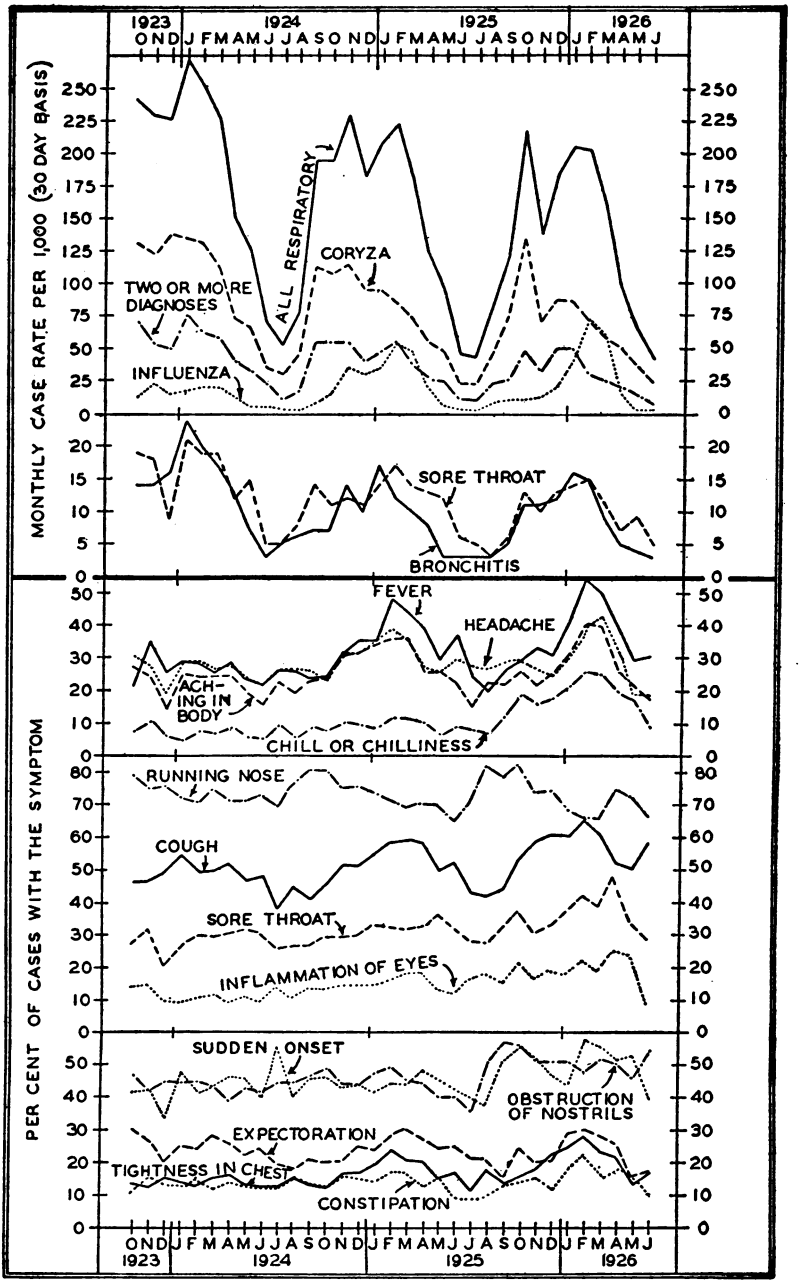

FIGURE 7.—Frequency of certain symptoms accompanying all respiratory attacks in different months bottom), and monthly incidence of specific respiratory diagnoses (top); medical officers' families, 923–26.

peak in January in each of the 3 years. Sore throat shows a rather regular seasonal variation in which all the winter months have high rates but no one stands out in a sharp or definite peak. The summer is the minimum in the incidence of all the diagnoses, July usually having the lowest rate.

TABLE 7.—*Monthly incidence of specific respiratory conditions in medical officers' families and monthly mortality from influenza and pneumonia in the general population (death registration area) of the United States, October 1923 to June 1926*

Month	Medical officers' families							General population	
	Monthly case rate per 1,000 (30-day basis)						Average number of persons under observation	Monthly death rate per 100,000 (30-day basis)	
	All respiratory	Coryza[1]	Bronchitis[1]	Sore throat[1]	Influenza[1]	All other respiratory[2]		Influenza	Influenza and pneumonia
1923									
October	243	131	14	19	12	67	768	0.65	5.9
November	230	122	14	18	23	53	938	1.15	9.0
December	228	138	16	9	14	51	1,171	1.46	10.6
1924									
January	272	134	24	21	18	75	2,114	2.37	14.7
February	252	130	20	19	21	62	3,060	3.04	16.3
March	227	113	17	19	21	57	3,243	3.22	16.6
April	149	72	13	12	13	39	3,594	2.60	14.3
May	125	65	7	15	6	32	3,701	1.40	9.1
June	69	34	3	5	5	22	3,740	.74	6.0
July	52	29	5	5	2	11	3,759	.36	3.3
August	77	44	6	8	2	17	3,796	.31	3.0
September	194	112	7	14	7	54	3,841	.43	4.0
October	195	107	7	11	16	54	3,874	.75	6.2
November	230	116	14	12	34	54	3,898	1.40	9.1
December	183	94	10	11	29	39	3,914	2.47	12.6
1925									
January	207	94	17	14	35	47	3,419	3.39	15.5
February	222	84	12	17	53	56	2,961	4.63	17.5
March	181	73	10	14	47	37	2,971	6.04	18.8
April	122	54	8	13	20	27	2,981	5.26	15.7
May	94	48	3	12	5	26	2,989	2.41	9.4
June	45	22	3	6	3	11	3,000	1.03	5.3
July	43	23	3	5	1	11	3,006	.49	3.4
August	81	45	3	3	8	22	3,024	.57	3.6
September	120	74	5	6	10	25	3,054	.67	4.1
October	217	134	11	13	11	48	3,101	1.12	6.7
November	137	71	11	10	13	32	3,126	1.62	10.0
December	182	88	12	13	19	50	3,147	2.19	12.3
1926									
January	206	86	16	14	41	49	3,108	4.06	17.4
February	203	70	15	15	72	31	3,037	5.83	18.9
March	163	58	9	11	59	26	3,037	11.03	28.2
April	97	49	5	7	15	21	3,037	8.35	21.2
May	66	35	4	9	2	16	3,037	2.94	10.8
June	42	23	3	5	3	8	3,037	1.15	6.0

[1] Refers to cases with sole diagnosis only, except that influenza with any other minor respiratory diagnosis was classified as influenza.
[2] Composed almost entirely of cases with two or more diagnoses (see footnote 3, p. 1157 for details).

These differences in the seasonal variation of the several reported diagnoses may indicate merely that the prevailing type of cold and the part or parts of the respiratory tract affected vary with season. They are, nevertheless, of interest along with the age incidence

and symptoms of respiratory attacks commonly classified in these categories.

TABLE 8.—*Frequency of certain symptoms in all respiratory affections in different months among members of medical officers' families, October 1923–June 1926*

Month	Total cases with known symptoms [1]	Percent of cases with the specified symptom												
		Fever	Aching in body	Headache	Chill or chilliness	Constipation	Sudden onset	Cough	Tightness in chest	Expectoration	Sore throat	Running nose	Obstruction of nostrils	Inflammation of eyes
1923														
October	192	21	27	31	7	11	42	46	14	30	28	79	47	15
November	205	35	25	28	11	16	43	47	13	27	32	75	42	14
December	255	25	15	20	6	13	34	49	16	20	21	76	45	9
1924														
January	574	29	25	29	4	13	48	54	14	26	27	72	45	9
February	707	28	24	29	7	15	42	49	14	24	30	71	46	11
March	733	25	24	27	6	12	44	50	16	29	30	75	44	12
April	514	28	24	27	8	14	47	52	17	26	30	72	39	9
May	455	24	19	24	5	13	46	47	14	23	32	71	44	12
June	241	22	15	22	5	12	40	48	13	25	30	73	42	9
July	192	26	23	26	10	12	56	38	13	20	26	69	44	14
August	285	25	19	26	5	15	41	45	15	19	27	77	45	11
September	702	23	23	26	8	13	46	41	13	21	27	80	47	14
October	745	24	24	24	8	13	47	45	12	21	29	80	49	14
November	850	31	30	32	10	16	44	51	17	21	29	75	44	15
December	698	35	32	32	9	16	44	51	17	25	30	75	44	15
1925														
January	678	35	34	35	8	15	42	55	19	24	33	74	48	15
February	578	48	36	39	12	17	45	59	24	29	32	71	49	16
March	537	44	36	35	11	17	45	59	21	31	32	70	45	18
April	343	38	25	27	10	13	49	58	21	28	32	70	45	18
May	270	29	25	26	6	16	46	49	15	24	36	70	40	13
June	123	37	22	29	9	10	43	52	17	25	33	65	41	12
July	119	24	15	27	8	9	40	43	12	22	29	71	36	17
August	240	19	23	27	7	11	38	42	18	22	28	82	51	18
September	287	25	21	28	12	14	52	44	14	16	32	79	57	15
October	436	29	26	29	19	15	57	53	16	25	37	83	56	22
November	255	33	22	27	16	17	53	59	18	21	31	74	51	16
December	361	31	25	25	17	12	48	61	23	21	34	74	52	19
1926														
January	405	42	31	31	22	19	45	61	25	29	38	68	52	18
February	410	54	40	40	26	23	58	66	29	31	42	66	48	22
March	391	49	40	43	25	16	56	61	24	28	39	66	52	20
April	210	33	27	32	20	19	53	52	22	26	49	75	51	26
May	121	29	21	19	17	16	53	50	14	16	34	73	46	18
June	70	30	17	19	9	10	40	49	17	14	29	67	54	9

[1] Respiratory cases with none of the 13 symptoms checked as present were considered unknown for symptoms and excluded from symptom tabulations but included in incidence tabulations.

During the fall of 1923 and throughout 1924 there was no indication of any general excessive incidence of or mortality from influenza in the United States that could be called an epidemic. In the early months of 1925 certain sections of the country reported considerable influenza mortality (top of fig. 8), and in 1926 there was a respiratory outbreak which was quite general throughout the United States (8) (9). Although the incidence of the total respiratory cases among medical officers' families is not excessively high in the early months of 1925 and 1926, there are definite increases in attacks reported as influenza as compared with corresponding months in 1924. The period from

October 1923 to June 1926, during which respiratory reports were received, therefore includes epidemic and nonepidemic times, and the

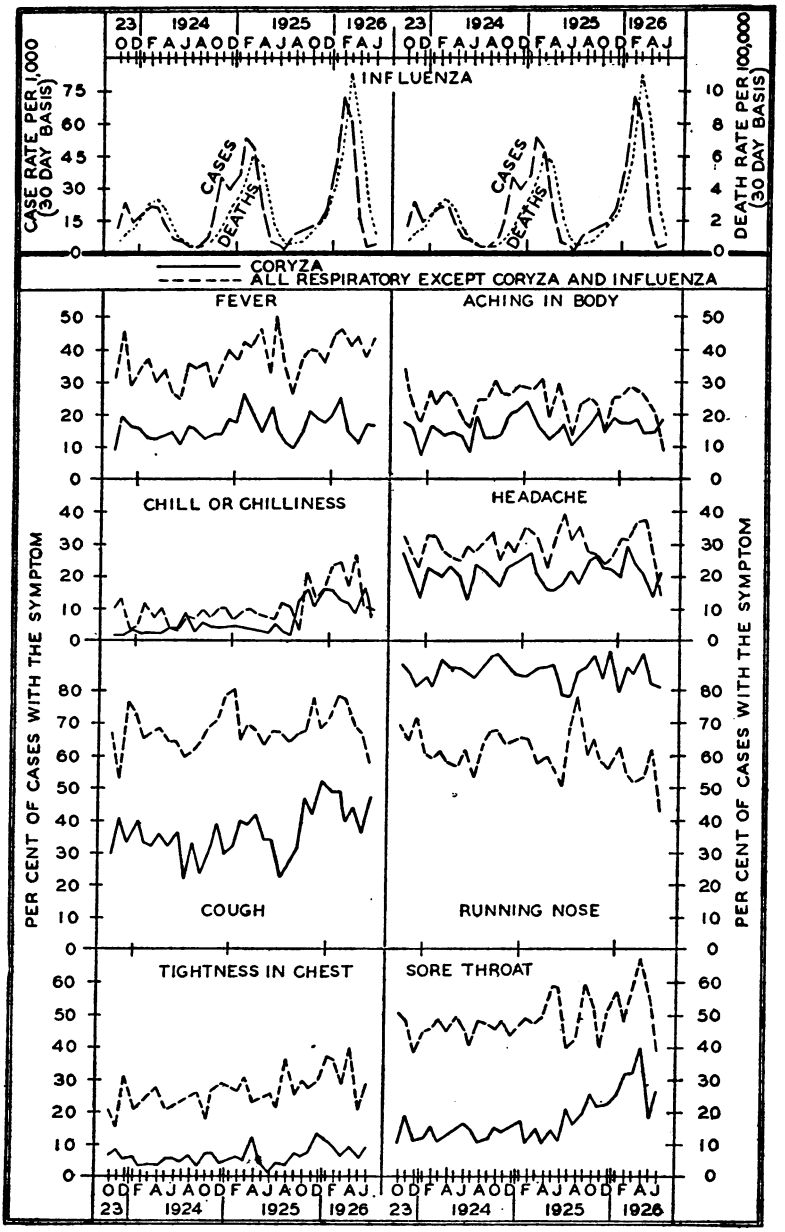

FIGURE 8.—Frequency of certain symptoms accompanying respiratory attacks not designated as influenza in different months in medical officers' families; monthly influenza case rates in medical officers' families and monthly influenza death rates in the registration area of the United States, 1923–26.

variation in the symptoms accompanying respiratory attacks in the different months is of special interest. The bottom part of figure 7

shows this variation in the proportion of respiratory attacks that were accompanied by certain symptoms. The ratios are expressed as the percent of cases with these symptoms, and the cases are classified according to the month of onset.

It has been seen that a greater frequency of nearly all symptoms is reported with influenza than with other respiratory attacks. Fever, aching in body, headache, and chilliness might be expected to occur with greater frequency during months when influenza is epidemic, because they are usually reported as accompanying influenza. February or March, or both, of 1925 and also of 1926 stand out as distinctly above adjacent months and above the corresponding months of 1924 for fever, aching in body, headache, cough, tightness in chest, and expectoration. Running nose and sore throat do not show peaks for these months.

Apart from greater frequency of certain symptoms during epidemics, cough, expectoration, and tightness in the chest all tend to have a rather definite seasonal variation, accompanying respiratory attacks in the winter more frequently than in the summer. The seasonal curves of fever, aching in body, and headache are all similar, with greater frequency in the winter, particularly in times when influenza reports are excessively high, but affecting other winter months also. Running nose and obstruction of the nostrils show less variation but tend to accompany respiratory attacks more frequently in late summer and early fall than in other seasons.

Part or all of the variation from month to month in the proportion of respiratory attacks accompanied by a given symptom may be due to the varying number of influenza cases included in the total respiratory attacks; more influenza would usually result in more of the general symptoms being reported. The differentiation of the various respiratory diagnoses is a difficult clinical task and a matter upon which there are wide differences of opinion. It is possible that many cases that exhibit general symptoms usually associated with influenza may have been reported as chest or head colds or sore throats or some combination of these diagnoses. It would seem of interest to see whether respiratory attacks reported under designations other than influenza show any tendency toward an increase in general symptoms such as fever or aching at times when influenza cases are reported in larger numbers. Data bearing on this point are shown in figure 8. Since coryza, or head colds, is such a large group, the symptoms are shown for this diagnosis and for all respiratory cases except coryza and influenza. In other words, these curves are for cases not designated as influenza by the informant. To facilitate comparison, the monthly incidence of influenza as reported in medical officers' families and the monthly mortality from influenza in the registration area of the United States are plotted at the top of the graph.

In both coryza and in other respiratory diagnoses not designated as influenza there is a definite tendency during the winter months toward a greater frequency of fever and aching in body and headache, with peaks of these general symptoms in coryza tending to occur in the months when influenza incidence was at its height. Other symptoms that show little or no increase in frequency in 1925 show a rather definite rise in the early months of 1926, when influenza was generally epidemic in the United States. Among these symptoms are chilliness, cough, tightness in chest, and sore throat.

SUMMARY

Records of the number and clinical symptoms of respiratory attacks were obtained by semimonthly reports on the families of medical officers of the United States Army, Navy, and Public Health Service and the faculty members in certain universities. The records extend over a period of 33 months ending June 30, 1926, with an average of 2,998 persons under observation during these months. These data are supplemented by a year's record for 1,872 students in seven universities who reported for every one of the 24 half months of 1924.

This paper deals largely with the symptoms of respiratory attacks reported under the designations of coryza, bronchitis, sore throat, and influenza. Diagnoses are used as reported and refer to cases with only one designated diagnosis, except in tabulations for all respiratory cases combined.

The annual respiratory incidence in the family group was 1,851 cases per 1,000, or nearly 2 cases per person per year. Of this total about half of the cases were reported as coryza or head colds only; another fourth was made up of influenza, sore throat, and bronchitis, while the remaining fourth were combinations of two or more of these diagnoses.

The annual respiratory incidence for the students was 3,333 per 1,000, or more than 3 cases per person per year. The students reported upon themselves only and probably remembered and included more trivial attacks. Nearly three fourths of the cases were reported as coryza or head cold only.

The family and student data agree in the general symptom picture for each diagnosis and in the differences between the four minor respiratory diagnoses (fig. 1).

The great majority of the symptoms occur with about equal frequency in attacks among males and females. Of 13 symptoms upon which information was obtained, constipation, obstruction of the nostrils, and expectoration were the only ones to show much difference, and these occurred with greater frequency among males than females (fig. 2).

There is considerable difference between the age curves of the incidence of the several reported respiratory diagnoses (fig. 3).

The percentage of respiratory attacks accompanied by given symptoms varies widely with age, and a few symptoms show definite differences between the sexes at specific ages (fig. 5).

These age differences persist in the symptoms of the several reported respiratory diagnoses. The four minor respiratory diagnoses differ widely in symptoms present at specific ages (fig. 6).

The seasonal incidence curves of the four minor respiratory diagnoses differ greatly. Coryza has its peak incidence in the fall and decreases thereafter; influenza incidence in the years under study was usually low in the fall with a peak in the late winter or early spring; bronchitis and sore throat lie between these extremes (fig. 7).

The percentage of respiratory attacks accompanied by given symptoms varies widely in different months of the same year and in the same months of different years. The general symptoms, such as fever, aching, and headache, are most frequent in attacks during months when influenza is prevalent (fig. 7).

Respiratory cases reported under some designation other than influenza show some tendency toward more frequent general symptoms, such as fever, aching, and headache, during months when influenza is prevalent (fig. 8).

ACKNOWLEDGMENTS

The authors wish to make acknowledgment to Surg. J. G. Townsend, of the Public Health Service, who collected the data; to Dr. W. H. Frost, of the Johns Hopkins School of Hygiene and Public Health, to Principal Statistician Edgar Sydenstricker and other members of the statistical research staff of the Public Health Service for advice and assistance in the preparation of the study; to the Influenza Commission of the Metropolitan Life Insurance Co. for financial assistance; and to the many students and families who cooperated by reporting their respiratory attacks.

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COURT DECISIONS RELATING TO PUBLIC HEALTH

Issuance of certified copy of death record by local health officer upheld.—(Alabama Supreme Court; *Prudential Ins. Co.* v. *Calvin*, 148 So. 837; decided Mar. 16, 1933.) In an action on a life-insurance policy, one of the points raised before the supreme court was that the trial court—

committed reversible error in admitting, over defendant's timely objection, the paper purporting on its face to be "the death certificate" of Paul T. Calvin. This certificate was issued and signed by J. D. Dowling, M.D., Registrar, and beneath the word "Registrar" appear the capital letters B. R. This certificate is headed: "Jefferson County Board of Health, Birmingham, Alabama, Bureau of Records and Vital Statistics." Transcript of the record of death, Birmingham, Ala., June 15, 1932.

The supreme court said that it would "take judicial knowledge of the fact that Dr. Dowling was health officer of Jefferson County on June 15, 1932, and that certificate in question was issued by him as the registrar".

Concerning the contention that "the certificates of births and deaths must be obtained from the State registrar under the provisions of section 1087 of the code (as amended by Gen. Acts 1927, p. 780)", the court stated as follows:

* * * Of course, the State registrar may issue certificates of births and deaths, but he is not the only officer that has such authority. We are fully persuaded that, under section 7674 of the code, Dr. Dowling was authorized to make and furnish the certificate and that the same, as for any grounds of objection urged thereto, was properly admitted in evidence. * * *

Section 7674, referred to by the court, provided:

Registers of marriages, births, and deaths, kept in pursuance of law or any rule of a church or religious society, may be certified by the custodian thereof; and, when so certified, are presumptive evidence of the facts therein stated as well as of the law or rule in pursuance of which such registry was made and of the authority to certify the same.

Making changes in death record on file with State health authorities.—(Tennessee Supreme Court; *Continental Casualty Co.* v. *Nashville & American Trust Co. et al.*, 61 S.W. (2d) 461; decided June 24, 1933.) The plaintiff company had insured a certain named person against loss of life by accidental means, but expressly excluded coverage in the

event of suicide. The body of the insured was found one evening suspended from a rope attached to an electric fixture on the wall of his bedroom. A physician who had attended him earlier in the day was called and, after examining the body, filed a death certificate in which he ascribed death to suicide by strangulation. About 10 months later an inquest was held, in which the jury found that the insured died as a result of external violence or homicide. The record of the inquest was presented to and filed with the State bureau of vital statistics with the request that the previous record be corrected to conform with the finding of the inquest.

The insurance company brought action to have the coroner's proceedings declared void and to enjoin the defendants from using the record of the inquest as evidence. The defendants, by crossbill, asked the court to correct the record of the bureau of vital statistics by supplanting the first certificate with the subsequent certificate of the coroner. The lower court dismissed the defendants' crossbill and sustained the plaintiff's bill to the extent of holding the coroner's inquest void. In concurring with the lower court upon the result the supreme court said:

* * * When the certificate of Dr. Buckner [the attending physician] was filed and recorded by the registrar, it became a public record. Neither the superintendent of the bureau of vital statistics nor the commissioner of the State board of health had authority to institute an inquest 9 or 10 months after the record in the bureau of vital statistics was made, and that record could not be supplanted by the unrelated proceeding of the coroner. The subsequent coroner's inquest, insofar as it was designed to impair the verity of the record of the bureau of vital statistics, is void.

Whether the coroner's verdict as the record of criminal procedure is void is immaterial to this determination. It is sufficient to say that the registrar of the bureau of vital statistics had no authority to file the record of the coroner, because it has no place among his records. The chancellor very properly refused to perpetuate the injunction because the question of whether or not the coroner's inquest could be used as evidence on a trial between the insured and the insurance company over the right to recover the insurance is matter for the determination of the court trying the case.

DEATHS DURING WEEK ENDED SEPTEMBER 2, 1933

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

	Week ended Sept. 2, 1933	Corresponding week 1932
Data from 85 large cities of the United States:		
Total deaths	6,855	6,919
Deaths per 1,000 population, annual basis	9.6	9.9
Deaths under 1 year of age	527	585
Deaths under 1 year of age per 1,000 estimated live births (81 cities)	45	48
Deaths per 1,000 population, annual basis, first 35 weeks of year	11.0	11.4
Data from industrial insurance companies:		
Policies in force	67,907,473	70,963,568
Number of death claims	10,695	11,026
Death claims per 1,000 policies in force, annual rate	8.2	8.1
Death claims per 1,000 policies, first 35 weeks of year, annual rate	10.0	9.8

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

Reports for Weeks Ended September 9, 1933, and September 10, 1932

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Sept. 9, 1933, and Sept. 10, 1932

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932
New England States:								
Maine			1		1	7	0	0
New Hampshire					2		0	0
Vermont					1		0	0
Massachusetts	10	12		1	16	22	0	0
Rhode Island		2			1	2	0	0
Connecticut	3	1	1		6	3	1	1
Middle Atlantic States:								
New York	27	39	[1] 9	[1] 4	57	78	2	3
New Jersey	7	13	3	4	8	24	0	1
Pennsylvania	24	39			25	33	3	5
East North Central States:								
Ohio [2]	27	24	7	4	6	28	0	2
Indiana	20	38	30	13	2	4	3	2
Illinois	17	41	10	5	8	17	5	3
Michigan	16	6	2		10	16	0	1
Wisconsin	4	9	13	20	31	10	1	3
West North Central States:								
Minnesota	4	4	3		7	4	0	1
Iowa [3] [4]	14	3				1	0	0
Missouri	26	25			4	1	1	5
North Dakota	4				10	5	0	0
South Dakota	2	1			2		1	0
Nebraska	7	13			2	2	1	0
Kansas	7	14	1	1	8	5	1	1
South Atlantic States:								
Delaware		2					0	0
Maryland [2] [3]	1	13	2	5	2	3	0	0
District of Columbia	5	1			1	1	0	0
Virginia [4]	37	30			22	7	2	3
West Virginia	49	27	21	3	47	10	1	0
North Carolina [4]	58	58		9	9	12	0	2
South Carolina [3]	19	12	95	161	21	6	0	0
Georgia [3]	32	36		15	15	2	0	1
Florida [3]	5	9	1		1	1	0	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Sept. 9, 1933, and Sept. 10, 1932—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932
East South Central States:								
Kentucky	26	62					0	1
Tennessee	66	56	14	19	7	1	0	0
Alabama [2]	63	68	26	3	1	1	1	0
Mississippi [3]	29	30					0	0
West South Central States:								
Arkansas	20	23	2		10	1	0	0
Louisiana	10	22	5	7		1	0	0
Oklahoma [5]	67	47	25	13	3	1	0	1
Texas [2]	64	71	104	41	14	2	1	0
Mountain States:								
Montana	2	1	1	2	1	29	0	0
Idaho							1	1
Wyoming					4	2	0	1
Colorado	1	3			3		0	0
New Mexico	5	7		3	1	1	0	1
Arizona			3	1	2	1	0	0
Utah [3]		1			4	1	0	0
Pacific States:								
Washington	4	3			4	5	0	1
Oregon		2	6	3	7	4	0	0
California	24	26	9	81	40	25	2	1
Total	806	894	394	418	426	379	27	41

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932
New England States:								
Maine	5	1	3	2	0	0	1	5
New Hampshire	0	0	4	4	0	0	0	0
Vermont	2	0	3	4	0	0	0	0
Massachusetts	23	4	53	49	0	0	7	7
Rhode Island	1	2	3	6	0	0	1	0
Connecticut	6	2	10	11	0	0	3	2
Middle Atlantic States:								
New York	123	20	58	63	0	2	50	48
New Jersey	38	39	33	22	0	0	5	9
Pennsylvania	25	136	101	91	0	0	40	75
East North Central States:								
Ohio [2]	27	2	155	145	0	9	81	85
Indiana	2	1	48	33	2	0	11	34
Illinois	8	8	128	57	0	0	49	44
Michigan	7	9	52	43	0	1	39	44
Wisconsin	0	1	16	17	6	0	1	10
West North Central States:								
Minnesota	25	9	23	17	0	0	0	1
Iowa [3 4]	2	7	11	9	0	1	5	4
Missouri	3	1	29	22	0	0	10	35
North Dakota	11	2	2	4	0	0	3	6
South Dakota	2	1	8	0	0	0	4	1
Nebraska	4	2	18	11	0	0	3	2
Kansas	5	0	51	35	0	0	21	14
South Atlantic States:								
Delaware	0	2	4	1	0	0	5	1
Maryland [2 3]	1	2	12	10	0	0	17	32
District of Columbia	1	3	3	5	0	0	2	2
Virginia [4]	3	5	48	44	0	0	34	52
West Virginia	5	8	41	32	0	4	53	79
North Carolina [4]	1	3	40	31	0	0	15	20
South Carolina [2]	0	1	2	2	0	0	31	43
Georgia [3]	0	0	7	9	0	0	21	54
Florida [3]	0	0	2	3	0	0	2	5
East South Central States:								
Kentucky	3	2	72	62	0	1	43	65
Tennessee	11	1	60	31	1	1	75	48
Alabama [2]	2	0	29	45	0	0	21	24
Mississippi [3]	1	0	12	9	0	0	23	22

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Sept. 9, 1933, and Sept. 10, 1932—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932	Week ended Sept. 9, 1933	Week ended Sept. 10, 1932
West South Central States:								
Arkansas	0	0	6	13	0	0	10	47
Louisiana	1	0	9	4	0	0	20	21
Oklahoma [5]	1	0	17	16	0	0	54	56
Texas [2]	1	4	28	26	4	2	65	50
Mountain States:								
Montana	0	0	8	6	0	0	7	6
Idaho	0	0	0	2	0	0	2	0
Wyoming	0	0	4	7	0	0	2	0
Colorado	2	0	5	8	1	0	19	8
New Mexico	0	1	2	5	0	0	14	3
Arizona	1	0	1	4	0	0	13	1
Utah [3]	1	0	2	2	0	0	1	0
Pacific States:								
Washington	3	1	9	5	0	0	3	5
Oregon	1	0	10	8	3	3	4	5
California	3	4	69	46	2	3	13	15
Total	361	284	1,311	1,081	19	27	903	1,090

[1] New York City only.
[2] Typhus fever, week ended Sept. 9, 1933, 70 cases, as follows: Ohio, 1; Maryland, 1; South Carolina, 8; Georgia, 22; Florida, 3; Alabama, 32; Texas, 8.
[3] Week ended earlier than Saturday.
[4] Rocky Mountain spotted fever, week ended Sept. 9, 1933, 7 cases, as follows: Iowa, 1; Virginia, 3; North Carolina, 3.
[5] Exclusive of Oklahoma City and Tulsa.

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	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
May 1933										
Missouri	17	79	12	2	954	----	0	278	12	21
August 1933										
Arkansas	----	42	7	1,092	120	99	1	15	2	106
Connecticut	----	11	10	1	49	----	17	57	0	13
District of Columbia	1	29	1	----	19	1	1	20	0	7
New Mexico	----	21	----	34	9	3	2	10	4	34
North Dakota	6	26	10	----	68	----	20	28	0	6
Vermont	----	2	----	----	14	----	4	17	0	2

May 1933

	Cases
Missouri:	
Chicken pox	188
Mumps	407
Rabies in animals	12
Septic sore throat	12
Undulant fever	1
Whooping cough	77

August 1933

	Cases
Anthrax:	
Arkansas	2
Chicken pox:	
Arkansas	19
Connecticut	36
District of Columbia	6
New Mexico	75
North Dakota	20
Vermont	10

August 1933—Continued

	Cases
Conjunctivitis, infectious:	
Connecticut	1
Dengue:	
Arkansas	1
Dysentery, bacillary:	
Connecticut	2
German measles:	
Connecticut	1
North Dakota	2
Lead poisoning:	
Connecticut	1
Lethargic encephalitis:	
Connecticut	4
North Dakota	4
Mumps:	
Arkansas	3
Connecticut	31

August 1933—Continued

	Cases
Mumps—Continued	
New Mexico	17
Vermont	21
Ophthlamia neonatorum:	
Arkansas	1
North Dakota	1
Paratyphoid fever:	
Arkansas	1
Connecticut	1
Puerperal septicemia:	
New Mexico	1
Rabies in animals:	
Connecticut	7
Rocky Mountain spotted fever:	
District of Columbia	1

August 1933—Continued

	Cases
Scabies:	
North Dakota	2
Septic sore throat:	
Connecticut	2
New Mexico	1
Tetanus:	
Connecticut	1
Trachoma:	
Arkansas	1

August 1933—Continued

	Cases
Trachoma—Continued	
Connecticut	1
North Dakota	2
Typhus fever:	
Arkansas	1
Undulant fever:	
Arkansas	1
Connecticut	4
Vermont	1

August 1933—Continued

	Cases
Vincent's infection:	
North Dakota	13
Whooping cough:	
Arkansas	80
Connecticut	119
District of Columbia	44
New Mexico	35
North Dakota	34
Vermont	43

LETHARGIC ENCEPHALITIS, ST. LOUIS, MO.[1]

From July 31 to September 13, 1933, 441 cases of lethargic encephalitis were reported in the county of St. Louis, Mo., and 358 cases in St. Louis city. The total for the period was 799 cases with 138 deaths. The latest report stated that the epidemic was decreasing.

WEEKLY REPORTS FROM CITIES

City reports for week ended Sept. 2, 1933

State and city	Diphtheria cases	Influenza cases	Influenza deaths	Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
Maine:											
Portland	0		0	0	0	1	0	0	1	5	18
New Hampshire:											
Concord	0		0	0	2	0	0	0	0	0	14
Nashua	0		0	2	0	0	0	0	0	0	6
Vermont:											
Barre	0		0	0	1	0	0	0	0	2	3
Burlington	0		0	0	0	1	0	0	0	0	8
Massachusetts:											
Boston	3		0	7	5	22	0	5	0	45	168
Fall River	0		0	0	2	1	0	2	0	0	25
Springfield	0		0	1	0	1	0	2	0	2	24
Worcester	0		0	15	4	5	0	3	0	0	
Rhode Island:											
Pawtucket	0		0	0	0	0	0	0	0	0	12
Providence	0		0	0	0	6	0	2	1	32	52
Connecticut:											
Bridgeport	0		0	0	1	1	0	0	0	0	26
Hartford	0		0	4	1	2	0	0	0	1	34
New Haven	0		1	0	1	0	0	1	1	3	36
New York:											
Buffalo	0		0	2	19	2	0	4	0	39	116
New York	11	1	4	12	77	22	0	83	36	119	1,207
Rochester	0		0	1	2	3	0	0	0	9	39
Syracuse	0		0	0	1	0	0	0	0	8	35
New Jersey:											
Camden	2		0	0	1	2	0	2	0	0	28
Newark	0	1	0	0	4	1	0	5	0	36	82
Trenton	0		0	0	1	3	0	0	0	4	22
Pennsylvania:											
Philadelphia	3	1	0	10	12	13	0	22	4	9	376
Pittsburgh	1		0	1	13	6	0	5	1	49	133
Reading	0		0	1	1	1	0	0	0	6	17
Ohio:											
Cincinnati	2		0	1	4	6	0	6	13	19	104
Cleveland	3	23	1	1	8	8	0	9	1	32	141
Columbus	0	1	1	0	0	13	0	3	1	2	63
Toledo	0		0	1	0	8	0	1	1	8	62
Indiana:											
Fort Wayne	2		0	0	1	0	0	2	0	0	29
Indianapolis	0		0	2	3	3	0	3	2	3	
South Bend	0		0	0	0	1	0	0	0	2	18
Terre Haute	0		0	0	1	0	0	1	0	0	11
Illinois:											
Chicago	3		3	3	26	40	0	48	5	49	565
Springfield	0		0	0	0	1	0	0	1	1	14
Michigan:											
Detroit	8	1	2	2	3	7	0	18	2	69	190
Flint	2		0	0	1	4	0	0	3	4	15
Grand Rapids	0		0	0	0	2	0	1	0	12	20

[1] See pages 1182 and 1185 for other reports on lethargic encephalitis.

City reports for week ended Sept. 2, 1933—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Wisconsin:											
Kenosha	1		0	1	0	0	0	0	0	5	7
Milwaukee	0		0	0	3	4	0	4	0	90	89
Racine	0		0	0	0	0	0	0	0	20	8
Superior	0		0	0	0	0	0	0	0	2	11
Minnesota:											
Duluth	0		0	0	0	1	0	0	2	0	29
Minneapolis	1		0	1	0	2	0	1	0	1	69
St. Paul	0		0	0	1	3	0	1	0	23	54
Iowa:											
Des Moines	8		0	0	0	2	0	0	0	0	29
Sioux City	1			0		2	0		0	2	
Waterloo	0			0		0	0		0	2	
Missouri:											
Kansas City	1		0	0	5	2	0	3	0	6	89
St. Joseph	2		0	0	2	0	0	0	0	0	17
St. Louis	9			11	6	5	0	10	4	10	219
North Dakota:											
Fargo	0		0	4	0	0	0	0	0	1	3
Grand Forks	0		0	0	0	0	0	0	0	0	0
South Dakota:											
Aberdeen	0		0	0	0	0	0	0	0	0	0
Nebraska:											
Omaha	3		0	0	0	4	0	0	0	5	32
Kansas:											
Topeka	3		0	1	2	1	0	0	0	0	33
Wichita	0		0	0	2	3	0	1	1	0	24
Delaware:											
Wilmington	1		0	0	1		0	0	0	1	26
Maryland:											
Baltimore	0	1	2	2	9	6	0	14	0	55	191
Cumberland	0		0	0	0	0	0	0	0	0	14
Frederick	0		0	0	0	0	0	0	1	0	1
District of Columbia:											
Washington	1		0	1	5	2	0	7	1	3	129
Virginia:											
Lynchburg	2		0	4	0	0	0	0	0	2	9
Richmond	4		0	1	0	1	0	2	1	0	44
Roanoke	6		0	0	0	0	0	0	4	0	10
West Virginia:											
Charleston	5		0	0	0	0	0	0	2	0	17
Huntington	1		0	0	0	4	0	0	0	0	0
Wheeling	0		0	0	0	1	0	2	1	0	17
North Carolina:											
Raleigh	1		0	0	1	3	0	0	0	2	14
Wilmington	0		0	0	1	1	0	0	0	0	17
Winston-Salem	3		0	2	0	3	0	2	2	2	17
South Carolina:											
Charleston	2	5	0	0	1	0	0	3	1	3	17
Greenville	0		0	0	1	0	0	0	0	0	14
Georgia:											
Atlanta	12	15	1	1	4	1	0	6		8	66
Savannah	1	1	0	0	1	1	0	1	1	1	25
Florida:											
Miami	1		0	0	2	0	0	3	1	0	35
Tampa	3		0	0	1	1	0	1	0	0	23
Kentucky:											
Ashland	0		0	0	0	0	0	0	1	11	0
Lexington	0		0	0	2	2	0	2	2	0	21
Louisville	6		0	0	4	5	0	2	2	1	74
Tennessee:											
Memphis	0		0	3	4	0	0	8	7	6	79
Nashville	4		0	1	2	7	0	0	6	0	47
Alabama:											
Birmingham	4	1	0	0	0	2	0	3	4	2	49
Mobile	4		0	0	1	0	0	1	1	0	14
Montgomery	1			0		1	0		0	0	
Arkansas:											
Fort Smith	1			0		0	0		0	0	
Little Rock	0		0	3	0	0	0	3	0	0	3
Louisiana:											
New Orleans	6	2	2	0	10	5	0	11	4	0	149
Shreveport	1		0	0	7	1	0	0	0	0	28
Oklahoma:											
Oklahoma City	2	3	0	0	6	4	0	6	0	0	42
Tulsa	1		0	0	0	3	0	0	5	0	

City reports for week ended Sept. 2, 1933—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Texas:											
Dallas	5	1	1	0	3	2	1	2	2	5	50
Fort Worth	0	------	0	0	1	0	0	2	4	0	27
Galveston	0	------	0	0	0	0	0	0	0	0	15
Houston	7	------	0	0	2	1	0	3	0	0	52
San Antonio	5	------	0	0	4	1	0	5	0	0	56
Montana:											
Billings	0	------	0	0	0	0	0	0	0	1	5
Great Falls	0	------	0	0	1	0	0	0	0	1	9
Helena	0	------	0	0	0	0	0	0	0	0	1
Missoula	0	------	0	0	0	0	0	0	0	0	6
Colorado:											
Denver	0	16	0	4	4	3	1	4	2	5	70
Pueblo	0	------	0	0	0	0	0	0	0	2	7
New Mexico:											
Albuquerque	0	------	0	0	0	0	0	4	1	4	14
Utah:											
Salt Lake City	0	------	0	1	0	0	0	1	1	7	29
Nevada:											
Reno	0	------	0	0	0	0	0	0	0	0	3
Washington:											
Seattle	0	------	------	1	3	1	0	7	0	14	------
Spokane	0	------	------	7	2	0	0	------	1	0	25
Tacoma	0	------	0	0	0	1	0	0	0	2	21
Oregon:											
Portland	1	------	1	1	2	5	1	0	0	1	58
Salem	0	------	0	0	0	0	0	0	0	0	0
California:											
Los Angeles	21	3	0	11	9	15	1	16	1	48	246
Sacramento	0	------	0	0	1	0	0	7	0	2	34
San Francisco	2	3	0	2	1	6	0	10	0	13	168

State and city	Meningococcus meningitis		Poliomyelitis cases	State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:				Illinois:			
Boston	1	0	13	Chicago	1	1	11
Worcester	0	0	3	Michigan:			
Rhode Island:				Detroit	0	0	1
Pawtucket	0	0	1	Grand Rapids	0	0	1
Providence	0	0	2	Minnesota:			
Connecticut:				Duluth	0	0	2
Bridgeport	0	0	1	Minneapolis	0	0	10
New York:				St. Paul	0	0	2
New York	0	3	115	Missouri:			
Rochester	0	0	1	St. Louis	0	0	1
Syracuse	0	0	2	North Dakota:			
New Jersey:				Fargo	0	0	1
Newark	0	0	4	Delaware:			
Trenton	0	0	1	Wilmington	1	0	0
Pennsylvania:				Maryland:			
Philadelphia	0	0	1	Baltimore	0	0	1
Pittsburgh	1	0	0	Cumberland	0	0	1
Reading	1	0	0	Tennessee:			
Ohio:				Memphis	0	0	1
Cincinnati	0	0	1	Nashville	0	0	2
Cleveland	1	0	9	Washington:			
Indiana:				Seattle	0	1	1
Fort Wayne	0	0	2				
Indianapolis	3	1	0				
South Bend	0	0	1				

Lethargic encephalitis.—Cases: Portland, Maine, 1; New York City, 9; Philadelphia, 2; Pittsburgh, 3; Cleveland, 5; Chicago, 1; Detroit, 2; Grand Rapids, 2; Racine, 1; Minneapolis, 2; Kansas City, Mo., 5; St. Louis, 151; Omaha, 3; Louisville, Ky., 4; Birmingham, 2; Denver, 2; Pueblo, Colo., 1.

Typhus fever.—Cases: Charleston, S.C., 4; Savannah, 4; Birmingham, 1; Mobile, 1. Deaths: San Antonio, 1.

Pellagra.—Cases: Charleston, S.C., 3; Atlanta, 1; Montgomery, Ala., 1; New Orleans, 1; Albuquerque, 1; Los Angeles, 1.

FOREIGN AND INSULAR

ARGENTINA

Buenos Aires—Typhus fever—Correction.—The report of 6 cases of typhus fever in Buenos Aires, Argentina, during the week ended January 28, 1933, which has appeared in the cumulative table published each month in the PUBLIC HEALTH REPORTS, is an error. There was no typhus fever in Buenos Aires at that time.

CANADA

Provinces—Communicable diseases—2 weeks ended August 26, 1933.—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases for the 2 weeks ended August 26, 1933, as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis					1	1	1			3
Chicken pox		4		23	53	9	8	1	21	119
Diphtheria	2	6	2	32	17	13	2		2	76
Erysipelas				6	2	2				10
Influenza		5		1		1			2	9
Lethargic encephalitis				1						1
Measles		1		28	10		3	1	6	49
Mumps					25	1	8		3	37
Paratyphoid fever		4			17	1				22
Pneumonia							7		6	13
Poliomyelitis				4	7		8	8		27
Scarlet fever		8	8	49	35	17	2	9	7	135
Smallpox						1				1
Trachoma					15		11		21	47
Tuberculosis	4	1	7	114	73	15	39	3	32	288
Typhoid fever		1	6	84	35	3	1	1	3	134
Undulant fever					4				1	5
Whooping cough		13	8	168	303	84	35	8	12	631

Ontario Province—Communicable diseases—Five weeks ended July 29, 1933.—The Department of Health of the Province of Ontario, Canada, reports certain communicable diseases for the 5 weeks ended July 29, 1933, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cerebrospinal meningitis	10	6	Pneumonia		77
Chicken pox	728		Poliomyelitis	4	1
Diphtheria	38	2	Puerperal septicemia		1
Dysentery	1		Scarlet fever	207	
Erysipelas	1		Septic sore throat	21	1
German measles	8		Syphilis	240	1
Gonorrhea	283		Tetanus		2
Influenza		2	Tuberculosis	196	47
Measles	184	1	Typhoid fever	34	2
Mumps	180		Undulant fever	22	
Paratyphoid fever	6		Whooping cough	574	2

GREAT BRITAIN

Scotland—Vital statistics—Quarter ended June 30, 1933.—The Registrar General of Scotland has published the following statistics for the second quarter of the year 1933:

Population (estimated)	4,916,000
Births	23,212
Birth rate per 1,000 population	18.9
Deaths	15,121
Death rate per 1,000 population	12.3
Marriages	8,176
Deaths under 1 year	1,704
Deaths under 1 year per 1,000 births	73
Deaths from:	
Bronchitis	579
Broncho-pneumonia	470
Cancer	1,862
Cerebrospinal fever	56
Diabetes	154
Diphtheria	76
Dysentery	3
Erysipelas	48
Heart disease	2,494
Deaths from—Continued	
Influenza	135
Lethargic encephalitis	21
Measles	13
Nephritis, acute	69
Nephritis, chronic	266
Nephritis, unspecified	89
Pneumonia, lobar	319
Pneumonia, unspecified	176
Poliomyelitis	6
Puerperal sepsis	43
Scarlet fever	52
Syphilis	24
Tetanus	3
Tuberculosis	1,043
Typhoid fever	5
Whooping cough	251

ITALY

Communicable diseases—4 weeks ended April 30, 1933.—During the 4 weeks ended April 30, 1933, cases of certain communicable diseases were reported in Italy as follows:

Disease	Apr. 3-9		Apr. 10-16		Apr. 17-23		Apr. 24-30	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax	15	14	11	10	7	7	9	9
Cerebrospinal meningitis	25	21	10	10	15	10	11	10
Chicken pox	448	131	359	106	418	128	478	148
Diphtheria and croup	644	320	425	257	461	253	474	253
Dysentery	3	3	1	1	3	3	----	----
Lethargic encephalitis	6	5	3	3	2	2	1	1
Measles	1,849	246	1,409	228	1,727	270	1,801	268
Poliomyelitis	10	10	7	6	3	3	7	7
Scarlet fever	403	142	338	128	345	125	369	136
Typhoid fever	205	117	190	107	173	97	217	120

JAMAICA

Communicable diseases—4 weeks ended August 12, 1933.—During the 4 weeks ended August 12, 1933, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island of Jamaica, outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Cerebrospinal meningitis	1	----	Puerperal fever	----	6
Chicken pox	----	11	Scarlet fever	----	1
Diphtheria	1	3	Tuberculosis	23	98
Dysentery	7	13	Typhoid fever	28	85
Leprosy	----	1			

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 Aug. 25, 1933, pp. 1056–1068. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued Sept. 29, 1933, and thereafter, at least for the time being, in the issue published on the last Friday of each month.)

Cholera

Philippine Islands.—During the week ended September 9, 1933, cholera was reported in the Philippine Islands as follows: Leyte Province, Sogod, 1 case, 1 death; Cebu Province, Mundawe, 1 case, 1 death, Olongapo Island, 8 cases, 6 deaths.

Plague

France—Marseille.—A report has been received on the recent occurrence of cases of bubonic plague on board the S. S. *D'Artagnan* in the port of Marseille, France. The vessel arrived at Marseille from Saigon, Indo-China, June 10, 1933, and was placed out of commission for reconditioning and her crew and officers quartered on board. On August 6, two members of the crew became ill, and the disease was diagnosed as bubonic plague. Both of these patients died. The vessel was taken to a buoy in the harbor and 94 members of the crew were placed in isolation. Six additional cases occurred among members of the crew, with 1 additional death on August 9. Anti-plague serum was administered, and the other 5 patients have progressed to convalescence. The vessel was fumigated with sulphur anhydride, and 320 rats were recovered. None of these rats was reported to be plague-infected. On July 17, 24 and 25, one dead rat was brought to the port laboratory each day, and all were found to be plague-infected. These rats were picked up on the wharf near the S. S. *D'Artagnan.*

Iraq—Baghdad.—During the week ended September 2, 1933, 1 case of plague was reported at Baghdad, Iraq.

Typhus Fever

Chile.—During the week ended August 26, 1933, about 10 new cases of typhus fever were reported in the Province of Aconcagua, Chile. Five of the cases occurred in Valparaiso, 3 in Calera, and 1 in Limache.

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