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AGE AND SEX INCIDENCE OF INFLUENZA IN THE EPIDEMIC OF 1943–44, WITH COMPARATIVE DATA FOR PRECEDING OUTBREAKS [1]

Based on surveys in Baltimore and other communities in the Eastern States

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Monthly influenza-pneumonia death rates in Massachusetts (*14*) show a series of moderate-sized epidemics of those diseases from 1890 to 1900, followed by several smaller outbreaks from 1901 to 1907. Then came almost a decade in which there was practically no excess mortality over the usual seasonal expectancy, but minor epidemics occurred in the early months of 1916, 1917, and 1918. Since September of 1918 weekly mortality from influenza and pneumonia in groups of cities is available (*3, 4, 6, 15*). Counting minor and major epidemics, the current influenza outbreak of December–January 1943–44 was the twentieth period since the beginning of 1916 in which influenza and pneumonia mortality was above the usual seasonal expectancy in nearly all geographic sections of the United States. In practically every instance the excess in mortality extended over a period of 2 to 4 months, with a mortality peak which marked the phenomenon with the usual characteristics of an influenza outbreak.

The recent accelerated decrease in the mortality from pneumonia and influenza which began about 1938 (*15*) is presumably due to newer methods of treatment. Improved treatment would reduce the mortality but would affect the number of cases of pneumonia only insofar as these drugs are used in influenza to prevent the occurrence of complications and presumably would have no effect upon the number of influenza cases. The mortality from influenza and pneumonia in excess of the usual seasonal expectancy has been used as a measure of the extent and severity of influenza epidemics because the reporting of cases is so incomplete; however, in the last few years of greatly

[1] Received for publication April 11, 1944, from the Division of Public Health Methods. Few of the data included in this paper have been published in the form and detail in which they appear here; however, various papers have described the nature and scope of the several projects involved, and references to such papers are made in footnotes to the tables and elsewhere. The 1920 Baltimore data were collected under the supervision of W. H. Frost and Edgar Sydenstricker, but the only published results are those pertaining to immunity which were included in Jordan's treatise (*16*, pp. 297–298). The 1943–44 data as well as those for the outbreaks of 1939–40 and 1940–41 were collected under the supervision of Associate Statistician F. Ruth Phillips, with the cooperation and assistance of the Milbank Memorial Fund, the Johns Hopkins School of Hygiene, and the Baltimore City Health Department.

reduced case fatality the smaller epidemics may mean fewer deaths but not necessarily fewer cases.

About the time of and following the 1918 influenza epidemic there was a tendency to attribute the disease to the Pfeiffer or influenza bacillus. After much work on various organisms found in the nose and throat of influenza patients, the affection has been classified as a virus disease and two or more specific viruses have been identified (*13*, *21*). At least one of these viruses (A virus) has been identified in interepidemic cases as well as those occurring during an epidemic (*23*). Virus A has been identified in cases occurring during the current 1943–44 epidemic (*23*, *30*) and also in the outbreaks of 1932–33, 1934–35, 1936–37, 1938–39, and 1940–41, although B virus was also found in the 1938–39 epidemic (*13*). On the other hand, the epidemics of 1935–36 and 1939–40 have been attributed to B virus. Both viruses have been found in the same epidemic and occasionally in the same patient (*13*); in all epidemics tests in many cases have failed to identify either A or B virus (*21*). There appears to be no way to tell whether the disease which has been called influenza or grippe in the numerous epidemics preceding the work on influenza viruses was etiologically the same or different in the several epidemics.

While a specific infectious disease usually displays a characteristic age curve, this is not invariably true (*18*, *20*, *29*). The age curves of some of the acute communicable diseases vary under certain circumstances (*10*, *11*); in areas where measles has not occurred for many years, this childhood affection freely attacks persons of all ages (*8*, *19*, *24*). While variation in the epidemiological characteristics of what has been recorded as influenza or grippe may have little relation to etiology, it seems worth while to compare the several respiratory outbreaks with respect to different attributes, including age and sex incidence.

There are few data on officially reported cases of influenza prior to or during the great pandemic of the fall of 1918. Since 1920 the disease has been reportable in nearly all of the States, but reporting has been extremely incomplete. Because of the absence of case data, the United States Public Health Service undertook in 1918 to collect, by house-to-house canvass immediately after the epidemic, some data on the incidence of influenza and pneumonia with special reference to age and sex variations (*2*, *12*). In 12 of the 18 epidemics since the beginning of 1918, data for one or more localities have been collected by house-to-house canvasses immediately after the outbreak or by periodic canvasses or reports in studies that were under way at the time that the epidemic occurred. In 6 of the outbreaks the data pertain to surveyed groups in Baltimore, Md. (table 1); in 2 others to Hagerstown, Md. (table 2); and in the other epidemics except 1, they are for other communities in the eastern part of the United States (tables 4 and

TABLE 1.—*Age and sex incidence of certain respiratory diseases in canvassed families during five epidemics,*[1] *1918–44*

BALTIMORE, MD.

Age	Case rate per 1,000 population									Percent of total cases complicated by pneumonia			Number of persons canvassed	
	Total: influenza, grippe, pneumonia, and colds in bed [2]			Influenza and grippe			Pneumonia [3]							
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Male	Female
Epidemic of 1918–19 (September 1918–January 1919)														
All ages [4]	246	236	254	195.8	189.6	201.2	18.0	17.5	18.4	7.3	7.4	7.2	15,440	17,921
Under 5	283	285	281	214.8	220.6	208.2	29.4	32.3	26.5	10.4	11.3	9.4	1,642	1,585
5–9	366	369	364	315.9	318.7	313.2	14.7	14.0	15.5	4.0	3.8	4.2	1,500	1,488
10–14	317	310	325	265.0	257.5	272.2	12.4	10.2	14.5	3.9	3.3	4.5	1,375	1,451
15–19	289	257	317	235.2	213.2	254.1	19.5	18.4	20.5	6.8	7.2	6.5	1,304	1,511
20–24	275	234	297	219.7	179.4	241.3	23.3	21.9	24.0	8.5	9.4	8.1	959	1,790
25–29	314	301	322	252.7	241.7	260.1	32.2	40.4	26.7	10.3	13.4	8.3	1,138	1,688
30–34	295	295	294	230.6	234.9	227.0	24.3	24.6	24.0	8.3	8.3	8.2	1,260	1,498
35–39	229	217	241	182.4	174.8	189.8	20.4	20.7	20.2	8.9	9.5	8.4	1,207	1,238
40–44	185	186	184	144.4	150.0	139.1	11.2	11.0	11.4	6.1	5.9	6.2	1,000	1,057
45–49	158	135	180	122.9	103.1	141.5	6.4	4.4	8.3	4.0	3.3	4.6	912	968
50–59	134	123	143	101.0	99.0	102.9	7.4	4.7	9.9	5.5	3.8	6.9	1,283	1,419
60 and over	101	103	100	66.0	69.2	63.3	12.4	9.1	15.1	12.2	8.9	15.0	1,098	1,327
Cases, all ages	8,199	3,640	4,559	6,533	2,928	3,605	599	270	329					
Epidemic of 1919–20 (December 1919–March 1920)														
All ages [4]	89	78	100	47.4	40.2	53.8	5.9	5.8	6.0	6.6	7.4	6.1	15,275	17,200
Under 5	86	86	86	35.2	34.8	35.6	7.7	11.2	4.2	8.9	13.0	4.9	1,435	1,433
5–9	92	91	93	45.8	41.3	50.0	7.3	8.5	6.1	7.9	9.4	6.5	1,404	1,480
10–14	67	60	74	32.2	29.0	35.1	2.2	3.1	1.4	3.2	5.7	2.8	1,310	1,456
15–19	65	61	69	35.6	34.0	37.0	3.2	3.9	2.6	4.9			1,295	1,514
20–24	81	61	97	45.7	32.3	56.6	4.6	3.1	5.7	5.7	7.6	6.5	1,274	1,573
25–29	104	81	126	61.6	45.1	76.3	8.1	7.5	8.7	7.8			1,331	1,496
30–34	123	105	138	71.9	60.8	81.5	7.6	6.6	9.3	6.2	7.0	7.1	1,218	1,424
35–39	106	85	125	58.4	44.9	70.4	8.6			8.1			1,203	1,365
40–44	89	71	105	42.9	37.2	48.3	4.8	3.7	5.0	5.4	4.6	4.7	997	1,076
45–49	99	91	106	52.6	43.8	61.1	3.8			3.9			891	932
50–59	101	95	106	51.2	49.2	52.9	7.4	5.0	7.6	7.3	6.3	7.8	1,319	1,531
60 and over	77	62	88	43.2	36.2	48.9	5.4			7.0			1,079	1,349
Cases, all ages	2,899	1,189	1,710	1,539	614	925	192	88	104					
Epidemic of 1928–29 (Dec. 1, 1928–Feb. 19, 1929)														
All ages [4]	138	118	157	109.0	92.8	123.2	4.8	4.7	4.9	3.5	4.0	3.1	7,695	8,750
Under 5	177	174	180	122.5	130.4	114.8	13.0	14.0	12.1	7.4	8.0	6.7	644	662
5–9	184	175	192	148.5	137.7	159.4	3.4	2.7	4.1	1.9	1.5	2.1	741	734
10–14	162	145	177	123.1	95.6	115.0	3.7	3.9	3.5	2.7	3.2	2.3	633	699
15–19	115	100	129	88.0									653	745
20–24	114	90	164	97.5	73.4	134.4	2.5	3.0	2.0	1.9	3.4	1.2	697	811
25–29	147			115.3									625	685
30–34	143	112	162	118.6	93.8	135.1	3.6	3.5	3.8	2.6	3.1	1.6	577	654
35–39	134			113.0									575	664
40–49	134	120	146	106.6	95.6	116.3	3.7	3.9	3.4	2.7	3.3	2.3	560	614
50–59	113	100	123	92.2	81.8	100.9	6.4	6.0	8.4	5.7	6.7	6.3	465	547
60 and over	115	77	144	85.8	51.5	111.9	8.4			7.3			621	813
Cases, all ages	2,275	905	1,370	1,792	714	1,078	79	36	43					

See footnotes at end of table.

TABLE 1.—*Age and sex incidence of certain respiratory diseases in canvassed families during five epidemics,*[1] *1918–44*—Continued

Age	Case rate per 1,000 population									Percent of total cases complicated by pneumonia			Number of persons canvassed	
	Total: influenza, grippe, pneumonia, and colds in bed[2]			Influenza and grippe			Pneumonia[3]							
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Male	Female
Epidemic of 1939–40 (December 1939–March 1940)														
All ages[4]	92	76	108	52.3	44.9	59.6	4.2	3.9	4.5	4.6	5.1	4.2	3,096	3,104
Under 5	92	83	102	38.4	37.6	39.2	9.6	15.0	3.9	10.4	18.2	3.8	266	255
5–9	165	132	204	78.2	77.8	78.7	6.3	7.8	4.6	3.8	5.9	2.3	257	216
10–14	103	94	111	46.3	40.8	51.6	2.8	------	5.5	3.0	------	5.7	245	252
15–19	81	77	86	47.5	47.0	47.9							298	292
20–29	78	66	90	44.4	35.4	53.3	3.4	5.1	1.7	4.3	7.7	1.9	593	600
30–39	85	74	95	53.3	58.0	48.6	5.0	2.0	8.1	6.0	2.7	8.5	500	494
40–49	92	57	127	64.5	32.0	96.2	2.4	2.5	2.4	2.6	4.3	1.9	406	416
50–59	97	86	108	57.8	51.5	64.0	3.4	1.9	5.2	3.5	3.0	5.3	291	297
60 and over	65	34	91	45.4	30.2	58.2	3.9			6.1			232	275
Cases, all ages	569	235	334	324	139	185	26	12	14	------	------	------	------	------
Epidemic of 1940–41 (December 1940–March 1941)														
All ages[4]	106	104	108	60.3	58.8	61.8	4.5	5.1	3.9	4.3	4.9	3.6	2,553	2,555
Under 5	117	123	110	44.3	59.1	28.7	14.0	9.1	19.1	12.0	7.4	17.4	220	209
5–9	194	173	218	97.1	79.2	117.3	5.2	9.9	-----	2.7	5.7	-----	202	179
10–14	111	101	121	44.3	45.2	43.5	5.6	9.1	2.2	5.5	8.0	2.4	199	207
15–19	95	125	66	53.8	58.3	49.4							240	243
20–29	92	85	99	57.4	51.2	63.6	1.0	2.0	-----	1.1	2.3	-----	508	503
30–39	98	90	106	62.3	59.4	65.2	2.4	2.4	2.4	2.4	2.6	2.3	421	414
40–49	103	87	119	62.8	53.9	71.6	4.5	6.0	3.0	4.3	6.9	2.5	334	335
50–59	104	129	78	76.6	95.8	57.6	2.1	2.3	6.5	2.0	2.3	7.5	240	243
60 and over	80	63	95	46.2	31.7	58.6	7.3			9.1			189	222
Cases, all ages	542	265	277	308	150	158	23	13	10	------	------	------	------	------
Epidemic of 1943–44 (Nov. 15, 1943–Jan. 31, 1944)														
All ages[4]	210	195	223	149.0	137.9	158.1	3.9	3.7	4.1	1.9	1.9	1.8	4,604	5,603
Under 5	300	310	290	161.0	181.0	140.0	6.1	6.5	1.3	2.0	2.1	.4	420	400
5–9	325	313	336	208.9	208.7	209.0	1.4			.4			345	354
10–14	226	231	221	138.3	139.9	136.6	1.3	2.8	-----	.7	1.5	-----	386	366
15–19	165	141	183	92.3	70.5	107.9							326	454
20–24	198	163	206	146.9	128.6	152.2	2.6	2.0	2.9	1.4	1.3	1.4	193	549
25–29	186			142.7									297	502
30–34	221	194	228	170.7	153.1	177.1	3.6	3.9	3.3	1.7	2.0	1.5	377	443
35–39	204			161.5									387	455
40–49	195	162	226	150.7	130.5	169.4	3.2	------	6.3	1.7	------	2.8	743	797
50–59	193	174	212	147.1	124.2	170.7	5.5	5.4	8.8	2.9	3.5	4.4	644	627
60 and over	163	131	187	134.1	109.2	152.7	9.2			5.6			467	622
Cases, all ages	2,147	897	1,250	1,521	635	886	40	17	23	------	------	------	------	------

[1] Data for 1918–19, 1919–20, and 1928–29 were collected by a special canvass of families near the end of the respective epidemics, except for a recanvass in January 1919 to cover a second epidemic wave (*2, 5, 12, 16* pp. 297–298). The surveys covered white and colored families residing in districts scattered throughout Baltimore. Data for 1939–40 and 1940–41 were collected by monthly canvasses of families to secure a record of all illness; the survey covered white families in certain blocks of the Eastern Health District (Wards 6 and 7) (*9*). Data for 1943–44 were collected by a special canvass in February 1944, but a large proportion of the families had been visited periodically as late as 1941, 1942, or the first half of 1943 in connection with the prior morbidity study (*9*). The survey covered white families residing in certain blocks of the Eastern Health District (Wards 6 and 7).

[2] In 1918–19 and 1919–20 severe colds, with 1 or more days in bed, were recorded as "doubtful" and included in the total; in 1928–29, 1939–40, 1940–41, and 1943–44 colds with 1 or more days in bed were included in the total.

[3] Pneumonia cases include a few fatal cases of influenza or grippe that were not designated as pneumonia in the family statement.

[4] All ages include a few of unknown age.

TABLE 2.—*Age and sex incidence of certain respiratory diseases in canvassed families during two epidemics,*[1] *1921–23*

HAGERSTOWN, MD.

Age	Case rate per 1,000 population									Percent of total cases complicated by pneumonia[2]			Average number of persons under observation	
	Total: influenza, grippe, pneumonia, and colds in bed			Influenza and grippe			Pneumonia[2]							
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Male	Female
	Epidemic of 1921–22 (Jan. 1–Apr. 30, 1922)													
All ages[3]	81	77	85	64.3	62.5	66.0	3.7	3.0	4.3	4.5	3.9	5.0	3,328	3,530
Under 5	91	81	102	53.4	44.9	63.4	19.4	12.0	28.2	21.4	14.8	27.6	334	284
5–9	97	120	71	74.0	102.6	42.8	4.6	2.2	7.1	4.7	1.8	10.0	458	421
10–14	106	127	86	87.9	104.2	71.4	4.6	4.7	4.5	5.7	5.3	6.3	355	350
15–19	50	42	58	41.9	31.4	51.6							287	310
20–24	41	54	69	33.0	45.3	54.2	.5	1.1	-----	.7	1.6	-----	230	255
25–29	81			65.8									234	298
30–34	68	77	80	50.9	60.4	65.0							252	279
35–39	91			76.3									228	244
40–49	93	80	105	80.9	75.0	86.4	1.1	1.1	1.0	1.2	1.9	.9	400	428
50–59	87	47	123	69.8	43.3	94.2							254	276
60 and over	71	42	94	58.6	29.4	81.2							238	308
Cases, all ages	558	257	301	441	208	233	25	10	15	-----	-----	-----	-----	-----
	Epidemic of 1922–23 (Dec. 17, 1922–Apr. 14, 1923)													
All ages[3]	206	183	227	183.8	161.6	204.7	6.3	6.5	6.1	3.1	3.6	2.7	3,385	3,600
Under 5	196	200	191	155.4	160.9	149.2	14.4	12.4	16.6	7.3	6.2	8.7	404	362
5–9	250	262	238	228.0	234.0	221.5	4.5	2.1	7.0	1.8	.8	2.9	470	429
10–14	230	208	251	213.4	191.1	235.1	3.8	4.7	3.0	1.8	2.4	1.3	361	370
15–19	179	176	183	155.6	144.4	166.1							284	301
20–24	140	119	215	131.3	108.4	198.2	3.0	4.4	1.8	1.7	3.7	.8	217	263
25–29	201			182.0									235	287
30–34	226	155	270	205.4	141.9	249.0	4.0	4.2	3.8	1.9	2.7	1.4	244	277
35–39	203			190.8									228	249
40–49	206	181	230	192.3	176.0	208.1	4.8	4.9	4.8	2.4	2.7	2.1	409	418
50–59	208	185	228	171.4	152.6	188.4	11.4	15.1	10.9	5.5	8.9	4.6	249	276
60 and over	207	154	247	177.9	130.8	214.5	14.3			6.9			214	275
Cases, all ages	1,437	618	819	1,284	547	737	44	22	22	-----	-----	-----	-----	-----

[1] Data collected in bimonthly canvasses of families to secure a record of all illness; the survey covered white families residing in districts scattered throughout Hagerstown (27).
[2] Pneumonia cases include a few fatal cases of influenza or grippe that were not designated as pneumonia in the family statement.
[3] All ages include a few of unknown age.

5). The data for 1 epidemic refer to families of medical officers of the Army, Navy, and Public Health Service scattered throughout the country who were reporting semimonthly to the Public Health Service on respiratory attacks (table 3). These 12 outbreaks represent all of the major epidemics since the beginning of 1918 and all of the minor outbreaks except those of the spring of 1928, the winters of 1932–33 and 1936–37, and 3 other small epidemics during the period 1934-39. The groups canvassed include whole villages or townships, or districts scattered throughout the localities surveyed, except that the Baltimore data for the last 3 epidemics pertain to a sample of the families residing in the Eastern Health District (Wards 6 and 7) of the city.

TABLE 3.—*Age incidence of influenza among the families of medical officers of the Army, Navy, and Public Health Service during one epidemic,*[1] *1925–26*

MEDICAL OFFICERS' FAMILIES IN VARIOUS STATES

Age	Case rate per 1,000 persons under observation		Number of cases		Average number of persons under observation
	Total: influenza, grippe, and pneumonia	Influenza and grippe	Influenza and grippe	Pneumonia	
	Epidemic of 1925–26 (Dec. 20, 1925–Apr. 10, 1926)				
All ages	183	180	551	11	3,069
Under 5	256	250	82	2	328
5–9	257	239	66	5	276
10–14	133	133	36		271
15–19	136	136	18		132
20–29	114	114	26		229
30–39	192	186	138	4	740
40–49	178	178	108		606
50–59	151	151	57		377
60 and over	182	182	20		110

[1] Based on semimonthly reports of cases designated as influenza or grippe by the reporting medical officer during the 16-week period. Population predominantly white; included large part of Medical Corps (*31*).

Cases reported in the surveys were classified as "pneumonia," "influenza and grippe," and "doubtful" or "colds in bed." These doubtful categories include head and chest colds and bronchitis with one or more days in bed. Colds not in bed and all tonsillitis were excluded from all categories. This classification was based on the diagnosis as reported by the family informant; however, other studies have indicated that the informant usually repeats with reasonable accuracy the doctor's statement to the family.

The present paper is concerned with the age and sex incidence of respiratory attacks during these various epidemics, with special reference to the recent outbreak of December–January 1943–44.

AGE INCIDENCE

Because of the unusually high incidence in the young adult ages during the epidemic of 1918–19, of all influenza and particularly of cases complicated by pneumonia, there has been great interest in the age incidence of the disease in each succeeding epidemic. Moorehouse (*17*) contrasted the age incidence of influenza and pneumonia deaths in 1918 with the lesser epidemic of 1928–29, and a preceding publication from the Public Health Service (*7*) made a comparison by age and sex of not only the mortality but of total influenza incidence, pneumonia incidence, and the proportion of cases complicated by pneumonia in the same two epidemics. This study was based on the combined results of surveys made immediately following the 1918–19 and the 1928–29 epidemics in some 12 localities in the United States covering in each epidemic about 150,000 persons.

All cases.—Figure 1 shows the age incidence of the total influenza cases in Baltimore and other surveyed localities in the East during the several epidemics since 1918. The data include influenza, grippe,

pneumonia, and the severe colds that confined the patient to bed. In every instance the data refer to a period of 2½ to 4 months during which influenza was exceptionally prevalent in the community. Since there were no suitably comparable data available on the age incidence of minor respiratory attacks during nonepidemic periods, those here charted refer to total cases during the epidemic period and not to any excess over rates in nonepidemic periods. Figure 2 shows similar age curves except that they are plotted on a logarithmic

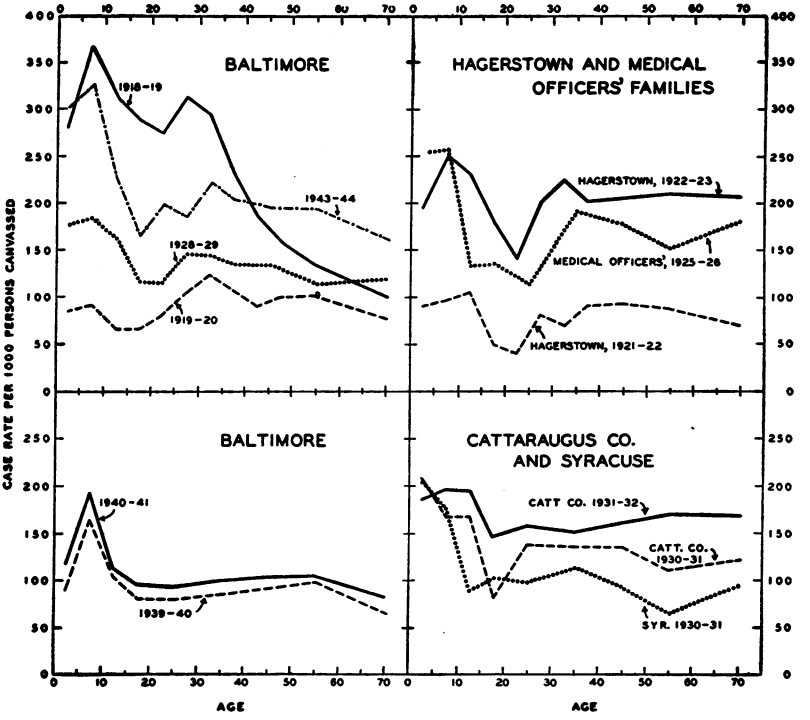

FIGURE 1.—Age incidence of certain respiratory diseases during 2- to 4-month epidemic periods, as recorded by special canvasses—Baltimore and other eastern localities, 1918–44. (Cases include influenza, grippe, pneumonia, and colds in bed.)

vertical scale and, with the exception of the South Carolina mill village, they include only cases designated by the family informant as influenza or grippe, excluding colds and pneumonia.

Although the periods covered varied in the different surveys, some rough comparison of actual case rates may be worth while. The rate in Baltimore for all types of cases (including colds in bed) was 210 per 1,000 canvassed population during a period of about 11 weeks in the epidemic of 1943–44, as compared with 138 in about the same period for the epidemic of 1928–29, and with 89 and 246 for somewhat longer periods in 1919–20 and 1918–19, respectively. For cases designated by the family informant as grippe or influenza (exclusive

of colds and pneumonia), the rate for the outbreak of 1943–44 was 149 per 1,000 as compared with 109 in 1928–29, 47 in 1919–20, and 196 in 1918–19. Thus in terms of cases of all types and of those specifically designated as grippe or influenza, the recorded rates in Baltimore for the recent outbreak were well above those for 1928–29 and 1920, but not up to the 1918 level.[2]

The rates for the total group of 12 localities surveyed in 1918–19 and 1928–29 (7) were higher than in Baltimore. Total cases of all types showed rates of 294 per 1,000 in 1918–19 and 189 in 1928–29 for all

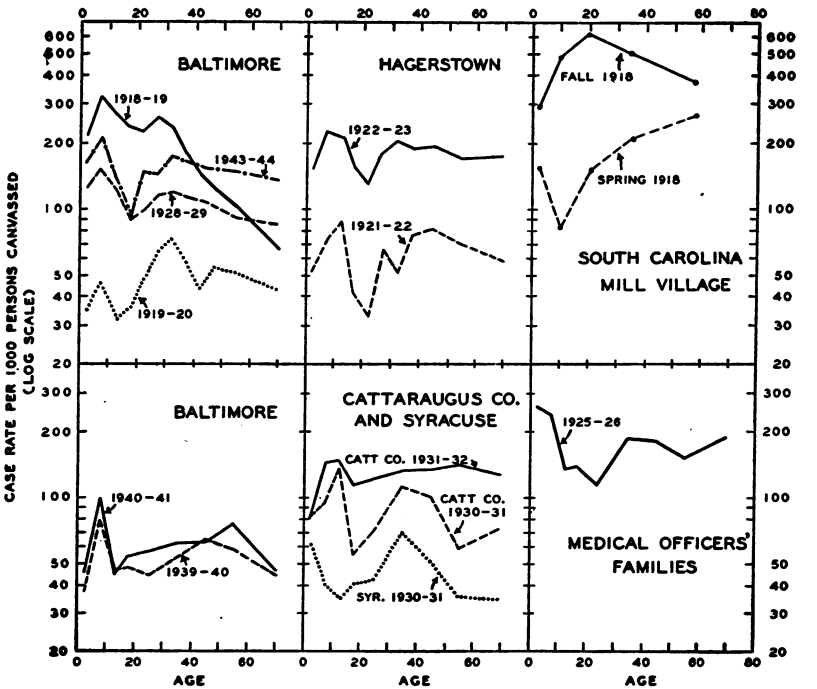

FIGURE 2.—Relative change with age in the incidence of influenza and grippe during 2- to 4-month epidemic periods, as recorded by special canvasses—Baltimore and other eastern localities, 1918–44. (Cases include influenza and grippe only, except in mill village.)

localities as compared with 246 and 138, respectively, for Baltimore. Grippe and influenza for all localities was 239 in 1918–19 and 145 in 1928–29, as compared with 196 and 109, respectively, for Baltimore. For epidemics since 1940, no data are available except for Baltimore.

As may be seen in figures 1 and 2, there is much variation in the age curves in the several epidemics. The 1918 Baltimore curve is the well-known 1918 influenza incidence curve, with a high case rate among children and young adults, greatly decreasing as age increases.

[2] Although part of the high recorded rate for 1943–44 may be due to the fact that some of the visiting in that year was done by canvassers who had visited the same families in a preceding morbidity study, one would not think that the type of enumeration was a major factor.

TABLE 4.—*Age and sex incidence of certain respiratory diseases in canvassed families during two epidemics, 1930–32* [1]

SYRACUSE, N. Y., AND CATTARAUGUS COUNTY, N. Y.

Age	Case rate per 1,000 persons under observation						Average number of persons under observation		
	Total: influenza, grippe, pneumonia,[2] and colds in bed			Influenza and grippe					
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Epidemic of 1930–31 (December 1930–March 1931): Syracuse									
All ages [3]	110	104	117	46.6	45.7	47.5	4,460	2,143	2,317
Under 5	203	182	221	63.9	42.4	82.1	360	165	195
5–9	176	181	171	39.6	51.2	29.2	455	215	240
10–14	88	103	87	35.5	36.9	38.2	422	225	197
15–19	103			39.7			378	182	196
20–29	97	62	129	42.3	33.0	51.0	567	273	294
30–39	113	106	120	71.4	71.7	71.2	672	321	351
40–49	93	99	87	49.8	52.8	46.9	642	322	320
50–59	64	67	87	36.0	38.3	33.7	472	220	252
60 and over	93			35.5			451	198	253
Cases, all ages	492	222	270	208	98	110			
Epidemic of 1930–31 (January–April 1931): Cattaraugus County									
All ages [3]	140	133	148	87.3	78.1	97.3	2,749	1,434	1,315
Under 5	206	197	217	80.2	63.4	100.0	262	142	120
5–9	168	167	169	94.0	80.0	108.1	298	150	148
10–14	167	139	119	137.5	97.4	105.0	269	145	124
15–19	83			55.3			217	122	95
20–29	139	151	125	69.3	81.4	56.3	332	172	160
30–39	135	120	150	114.1	108.4	119.8	333	166	167
40–49	134	99	173	101.7	76.9	129.6	344	182	162
50–59	111	104	130	57.2	53.5	79.9	297	147	150
60 and over	121			73.2			396	208	188
Cases, all ages	385	191	194	240	112	128			
Epidemic of 1931–32 (January–April 1932): Cattaraugus County									
All ages [3]	170	163	179	126.8	113.5	141.3	4,055	2,123	1,932
Under 5	184	158	212	80.3	54.5	108.7	386	202	184
5–9	196	159	234	143.8	104.5	183.5	438	220	218
10–14	196	195	147	145.3	125.3	135.3	413	223	190
15–19	146			111.1			342	192	150
20–29	157	169	145	121.5	123.6	119.1	502	267	235
30–39	152	114	188	132.5	104.8	159.0	468	229	239
40–49	165	176	154	133.5	133.6	133.3	502	262	240
50–59	171	153	188	140.6	120.2	145.6	434	223	211
60 and over	168			125.9			564	301	263
Cases, all ages	690	345	345	514	241	273			

[1] Data collected by canvasses of families at intervals of 2 to 4 months to secure a record of all illness. Population predominantly white. In Syracuse the families resided in districts scattered throughout the city; in Cattaraugus County 5 rural townships were completely canvassed (*22*).

[2] Pneumonia cases were too few to justify rates by age; data for all ages follow:

	Number of cases			Rate per 1,000 population			Percent of all cases complicated by pneumonia		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
Syracuse 1930–31	12	3	9	2.7	1.4	3.9	2.4	1.4	3.3
Cattaraugus Co., 1930–31	4	2	2	1.5	1.4	1.5	1.0	1.0	1.0
Cattaraugus Co., 1931–32	18	12	6	4.4	5.7	3.1	2.6	3.5	1.7

[3] All ages include a few of unknown age.

TABLE 5.—*Age and sex incidence of respiratory diseases in canvassed families during two epidemics,*[1] *1918*

MILL VILLAGE IN SOUTH CAROLINA

Age	Respiratory[2] case rate per 1,000 population			Number of respiratory cases[2]			Average number of persons under observation		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
	Epidemic of the fall of 1918 (September-November)								
All ages	464	455	471	236	112	124	509	246	263
Under 5	287	275	300	23	11	12	80	40	40
5–14	472	476	467	75	40	35	159	84	75
15–24	604	610	600	61	25	36	101	41	60
25–44	488	475	500	60	28	32	123	59	64
45 and over	370	364	375	17	8	9	46	22	24
	Epidemic of the spring of 1918 (March-May)								
All ages	151	126	174	85	34	51	562	269	293
Under 5	149	114	179	11	4	7	74	35	39
5–14	81	86	75	14	8	6	173	93	80
15–24	146	98	181	18	5	13	123	51	72
25–44	203	219	189	28	14	14	138	64	74
45 and over	259	115	393	14	3	11	54	26	28

[1] Data collected by semimonthly canvasses of all white families in the village to secure a record of all illness. (*26*).

[2] Cases include those designated by the housewife as influenza, grippe, colds, and pneumonia, as follows: Fall of 1918, influenza and grippe, 186; colds, 49; pneumonia, 1; spring of 1918, influenza and grippe, 30; colds, 55; pneumonia, 0.

The 1919–20 curve lacks the high childhood incidence but has a young adult peak. The 1928–29 curve has a childhood and a young adult peak of approximately the same height. The age curve for the recent 1943–44 epidemic is somewhat different from all of these; it has a high peak in childhood, with a much smaller peak in the young adult ages and with little decline in the older ages. Part but not all of the high childhood peak is accounted for by the bed colds. In the minor epidemics of 1939–40 and 1940–41 the childhood peak is confined largely to the 5–9 year age group, the adult peak being practically absent in the data for all cases (fig. 1) but somewhat more prominent in the curves for grippe and influenza only (fig. 2).

The age curves for the several localities for the epidemics of 1921–22, 1922–23, 1925–26, 1930–31, and 1931–32 are variable, but they tend to follow the general pattern of that of 1928–29, with rates for young adults that approximate those for the preschool and early school ages. Data for the South Carolina mill village are of special interest because periodic visiting was continued from early spring until after the autumn epidemic; they thus show the striking contrast between the age distribution of respiratory attacks in the epidemics of the spring and fall of 1918.

TABLE 6.—*Age incidence of influenza and pneumonia during the epidemic of 1918–19 among canvassed households in a rural Maryland county, in minor Maryland towns, and in Baltimore* [1]

Age	Case rate per 1,000 population				
	Total: influenza, grippe, pneumonia, and colds in bed			Pneumonia [2]	
	Charles Co., Md.	Minor Maryland towns	Baltimore, Md.	Minor Maryland towns	Baltimore, Md.
All ages	405	405	246	25.8	18.0
Under 5	380	414	283	38.2	27.3
5–9	448	493	366	21.6	13.4
10–14	486	512	317	15.2	11.3
15–19	508	493	289	19.3	18.5
20–24	493	476	275	37.0	21.1
25–29	465	485	314	39.7	29.4
30–34	441	488	295	46.2	21.8
35–39	407	421	229	38.8	18.4
40–44	349	321	185	14.9	10.7
45–49	277	300	158		
50–54	255	266	135	9.3	7.2
55–59	229	211	131		
60–64	211	183	124		
65–69	181	201	112	3.9	9.4
70–74	147	145	79		
75 and over	119	109	56		
Persons canvassed, all ages	16,147	12,482	33,361	12,482	33,361

[1] See text and text footnote for description of areas included. The surveys covered districts scattered throughout each minor town and covered all but 1 district of Charles County. Cases include those with onset from Sept. 1 to Dec. 1 to 15 in the minor towns and September–January in Charles County and Baltimore. See note to table 1 for Baltimore. Both white and colored families were included. Data from Britten (*2*).

[2] For pneumonia the rates for specific ages do not include deaths credited to influenza without mention of pneumonia, as in table 1, but all ages include such influenza deaths. No data on pneumonia are available for Charles County.

Data on the 1918–19 epidemic in a group of smaller Maryland towns and rural areas and for the whole of Charles County, Md., are available (*2*, *12*) and are shown in table 6. It is seen here that these rural communities showed roughly the same type of curve as Baltimore, but the recorded incidence was considerably higher. For all ages the case rate in both Charles County and the minor Maryland towns [3] was 405 per 1,000 persons, as compared with 246 in Baltimore. The Charles County rate shows a single peak at 15–19 years, whereas in Baltimore and the minor towns there is a tendency for a secondary peak at 25 to 35 years of age.

[3] The surveyed group in each of the 5 localities included in the minor Maryland towns had higher rates than Baltimore: Cumberland 410 cases per 1,000 population canvassed, Frederick 321, Lonaconing 594, Salisbury 459, and 3 rural districts 324 cases per 1,000. The pneumonia case rate and the death rate from influenza and pneumonia, based on reports in the canvasses, were both higher in 4 of the 5 towns and rural areas than in Baltimore; Salisbury was the exception in pneumonia incidence and Frederick in mortality. Populations canvassed in the 4 towns ranged from about 1,700 to 5,200 persons of all ages. The 3 localities combined into the "rural area" group were Downsville District of Washington County and Linganore District of Frederick County with about 700 persons canvassed in each, and Quantico District of Wicomico County with about 100 persons canvassed (*2*, *12*).

Within Baltimore city the case rate varied considerably in the several districts surveyed. A preliminary report (*25*) shows rates in 10 districts of Baltimore as ranging from highs of 477 and 385 cases per 1,000 population to lows of 135 and 67 cases per 1,000. Populations canvassed in the 10 districts ranged from 665 to 1,740 persons, with only 2 districts with less than 900 persons.

Rates quoted above refer to influenza, grippe, pneumonia, and colds in bed.

TABLE 7.—*Age incidence of influenza in the epidemics of 1920 and of 1918–19 as recorded in a canvass of all families living on Kelleys Island (Ohio) at the time of the 1920 epidemic* [1]

Age	Case rate per 1,000 population [2]		Number of cases [2]		Population observed
	1920 epidemic	1918 epidemic	1920 epidemic	1918 epidemic	
All ages	536	197	369	136	689
Under 5	604	110	55	10	91
5–9	570	215	45	17	79
10–14	544	291	43	23	79
15–19	569	235	29	12	51
20–29	571	286	52	26	91
30–39	565	185	52	17	92
40–59	466	182	69	27	148
60 and over	414	69	24	4	58

[1] Data from Armstrong and Hopkins (*1*).
[2] Cases include influenza, pneumonia, and doubtful. All cases in 1920 epidemic were in January and February except 3 before and 3 after those months. Cases for 1918 were recorded at the time of the 1920 survey.

In the Baltimore data, the 1919–20 epidemic shows influenza case rates that are considerably less than those for the epidemic of 1928–29 and are far less than the 1918–19 rates. This rather low rate for

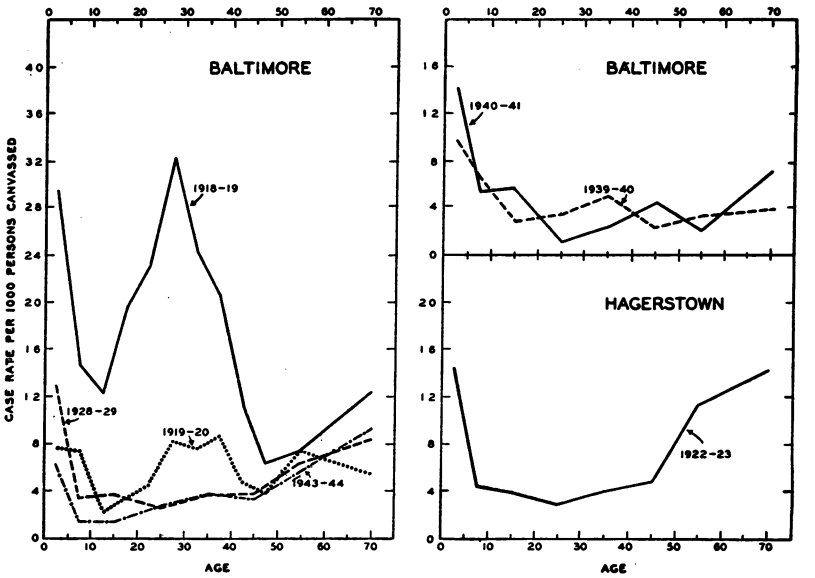

FIGURE 3.—Age incidence of pneumonia during 2- to 4-month epidemic periods, as recorded by special canvasses—Baltimore and Hagerstown, Md., 1918–44.

Baltimore in 1920 may not be true of other sections of the country. An intensive study of the epidemic of 1920 among about 700 people living on Kelleys Island near Sandusky, Ohio (*1*), showed an influenza rate for all ages of 536 cases per 1,000 persons as compared with only 89 for Baltimore. The Kelleys Island age curve of the incidence of

influenza in the 1920 epidemic was also more similar to the usual 1918 age curve than was true for Baltimore. Reports on influenza in the 1918 epidemic made in 1920 by persons living on Kelleys Island in 1920 showed a rate in 1918 of only 197 cases per 1,000 persons, but with the characteristic 1918 age curve (table 7). Although these reports made 2 years after the epidemic may not be complete, it is true that in certain cities in this general east north central region the peak in influenza-pneumonia mortality for October 1918 was not much higher than the peak for February 1920 (*4*).

Pneumonia incidence.—The numbers of persons canvassed in the surveys discussed above in connection with figures 1 and 2 ranged from about 33,000 in the Baltimore studies of 1918–19 and 1919–20 to about 2,700 for the Cattaraugus County epidemic of 1930–31 and about 500 for the mill village epidemics of 1918. The numbers of cases of pneumonia in some of the smaller groups were insufficient to

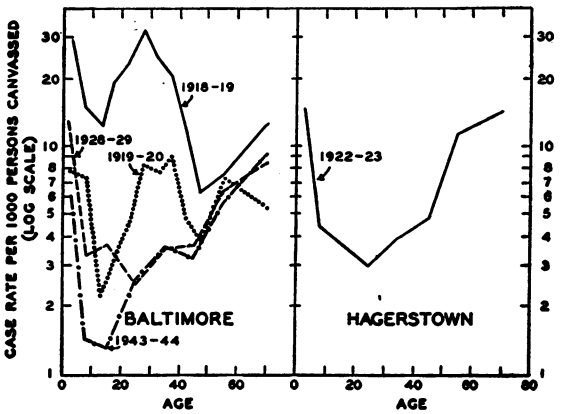

FIGURE 4.—Relative change with age in the incidence of pneumonia during 2- to 4-month epidemic periods, as recorded by special canvasses—Baltimore and Hagerstown, Md., 1918–44.

give any idea of the pneumonia age curve, particularly in recent years when pneumonia rates were lower. Figure 3 shows pneumonia case rates for specific ages in 7 different epidemics, and figure 4 shows on a logarithmic vertical scale the same age curves for 5 of these epidemics.

Pneumonia shows the largest relative differences among the several epidemics. In the 1943–44 outbreak the incidence of pneumonia as recorded in the family survey was 3.9 cases per 1,000 population, as compared with 4.8 cases in 1928–29, 5.9 in 1919–20, and 18.0 in 1918–19.

Baltimore showed about average pneumonia incidence rates in the epidemics of 1918–19 and 1928–29 (*7*); case rates per 1,000 persons for all 12 surveyed localities were 17.6 in 1918–19 and 5.0 in 1928–29, as compared with rates for Baltimore of 18.0 and 4.8, respectively. The

percentage of all cases that were complicated by pneumonia in Baltimore was above the average. Proportions of cases complicated by pneumonia for all localities were 6.3 percent for 1918–19 and 2.6 for 1928–29, as compared with percentages for Baltimore of 7.3 and 3.5, respectively.[4]

In Baltimore the 1918 epidemic shows the well-known young adult pneumonia peak at 25–29 years, with a slightly higher case rate than among children under 5 years of age. Although the incidence is much lower in 1920, there is a definite tendency toward a flat-top peak among young adults extending from 25 to 40 years of age. This peak is particularly evident in the semilogarithmic chart (fig. 4) which shows relative rather than actual variation with age. In the 1928–29 data and in the recent epidemic of 1943–44 there is no evidence of a young adult peak, the highest rates occurring among the youngest and the oldest age groups, as is usual in pneumonia in more normal years. In the adult ages the 1943–44 pneumonia rate follows closely the rates for 1928–29, but under 20 years of age the rates in 1943–44 are below those of 1928–29. The pneumonia rates for the 1922–23 epidemic in Hagerstown and the 1939–40 and 1940–41 epidemics in Baltimore do not show any evidence of young adult peaks; the age curves (fig. 3) for these recent Baltimore epidemics are based on rather few cases, and minor variations in them are apparently due to chance.

Pneumonia complications.—Figure 5 shows for the same 5 epidemics the percentage of the total recorded cases of influenza, grippe, and colds in bed which were complicated by pneumonia. Figure 6 shows the same percentages plotted on a logarithmic vertical scale. It will be recalled that the minor respiratory case rate in the 1919–20 epidemic in Baltimore was rather low, so that the percentage of cases

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[4] Since influenza survey case data are available in 1943–44 only for Baltimore, it may be worth while to consider excess mortality from influenza and pneumonia in Baltimore as compared with the average for groups of cities (*3, 4*).

The total excess mortality from influenza and pneumonia during the whole epidemic in Baltimore in 1918–19 was 665 per 100,000, or 21 percent above that for 35 large cities (550). In 1920 the corresponding excess rate in Baltimore was 82.0 per 100,000, or 16 percent below that of the 35 large cities (97.2), and 17 percent below that of 95 cities (99.3) representing all geographic sections of the country. In 1928–29 this same excess rate in Baltimore was 44.3 per 100,000, or 9 percent above that of the 35 large cities (40.8), but about the same as in the 95 representative cities (44.4). Preliminary computations for the epidemic of 1943–44 indicate that this total excess rate from influenza and pneumonia in Baltimore was 20.9 per 100,000 or 45 percent above the corresponding figure for the 35 large cities (14.4), and 35 percent above the figure for the 95 representative cities (15.5).

The excess mortality from all causes during the whole of the epidemic of 1943–44 in Baltimore was 54.6 per 100,000, or 10 percent above the corresponding figure for the 35 large cities (49.8) and 9 percent above the figure for the 90 large cities (49.9) included in the Weekly Mortality Index of the U. S. Bureau of the Census.

To summarize, Baltimore excess mortality from influenza and pneumonia was above the average for other large cities in the epidemic of 1918–19, below the average in 1920, slightly above the average in 1928–29, and above the average for large cities in 1943–44.

The normal or expected rates in the above computations were based on 7-year medians for the first 3 epidemics (*4*) and on a mean of the 2 preceding years in the preliminary computations for the 1943–44 epidemic. Populations used in these computations are based on U. S. Census reports. In the years since 1940 they pertain to the civilian population as based on ration book registrations; as most Army camps are outside of the city boundaries, no great error arises from this limitation. Deaths for all cities include both resident and nonresident.

complicated by pneumonia in 1919–20 is almost as high as it was in the 1918–19 epidemic. Moreover, the flat-top young adult peak

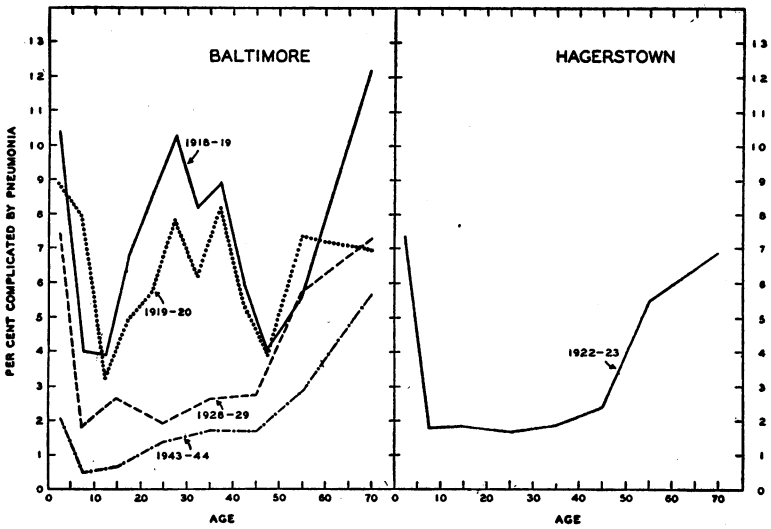

FIGURE 5.—Percentage of cases of certain respiratory diseases which were complicated by pneumonia—Baltimore and Hagerstown, Md., 1918-44. (Cases include influenza, grippe, pneumonia, and colds in bed.)

occurring between the ages of 25 and 40 years is quite similar in the two epidemics. The data for the 1943–44 epidemic, like those for

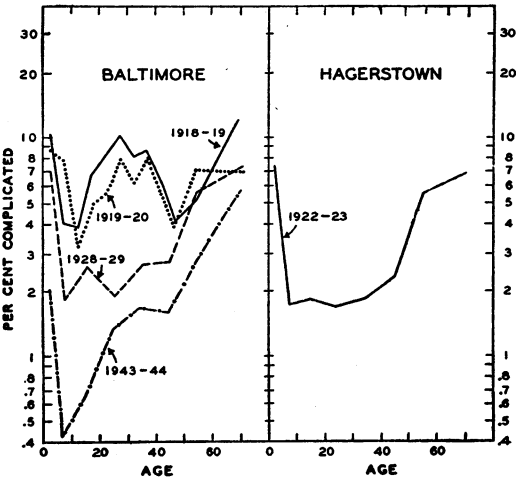

FIGURE 6.—Relative change with age in the percentage of cases of certain respiratory diseases which were complicated by pneumonia—Baltimore and Hagerstown, Md., 1918-44. (Cases include influenza, grippe, pneumonia, and colds in bed.)

1928–29, show no young adult peak. The general level of the proportion of all cases that were complicated by pneumonia is much lower

in 1943–44 than in the earlier epidemics, including that of 1928–29. For all ages combined, 7.3 percent of the 1918–19 cases were complicated by pneumonia, 6.6 percent of the 1919–20, and 3.5 percent of the 1928–29, as compared with only 1.9 for 1943–44. The percentage of cases complicated by pneumonia in the 1922–23 epidemic in Hagerstown shows an age curve that is similar to the Baltimore 1928–29 curve, with 3.1 percent of the cases for all ages recorded as complicated by pneumonia.

INCIDENCE AMONG MALES AND FEMALES

Data collected by house-to-house canvasses are not entirely reliable for sex comparisons because the informants are usually women who are able to report more completely upon their own minor illnesses than upon those of others in the household (*28*). Under these circumstances, minor respiratory rates for adult males that are equal to or greater than those for adult females are more significant than the reverse. Serious diseases like pneumonia would presumably be equally well reported for all members of the household, but the percentage of respiratory cases complicated by pneumonia would be influenced by the completeness of reporting of the total cases of respiratory illness.

Among children under 15 years of age the reports for both sexes are usually made by some adult in the household so that a comparison of boys and girls is fairly reliable even for minor conditions.

All cases.— Figure 7 shows for specific ages the incidence of influenza, grippe, pneumonia, and colds in bed among males and females. Considering all ages, the recorded rates for total cases and also for influenza and grippe are higher for females than males in every epidemic. However, in some of the outbreaks the differences are relatively small and are not consistent in the different age groups. Thus in Baltimore in the great epidemic of 1918–19 the rates for the two sexes are, with the exception of 15 to 30 years of age, roughly the same. In the Baltimore epidemics of 1943–44, 1939–40, 1928–29, and 1919–20 the recorded case rates are generally higher for females than for males. In the 1940–41 outbreak in Baltimore there is not much difference between the sexes, but in this and also in the minor Baltimore epidemic of 1939–40 the rather large peak at 5–9 years of age was higher for girls than for boys. The 2 Hagerstown epidemics show rather consistently higher rates for adult females, but the Cattaraugus County and Syracuse outbreaks do not show consistent differences between the sexes in the incidence of respiratory cases.

Pneumonia incidence.—Figure 8 shows pneumonia incidence rates among males and females of specific ages during four epidemics. Considering all ages combined and both minor and major epidemics, the pneumonia rate per 1,000 persons was slightly higher for females in 8 of the 11 epidemics, and higher for males in the other 3 outbreaks.

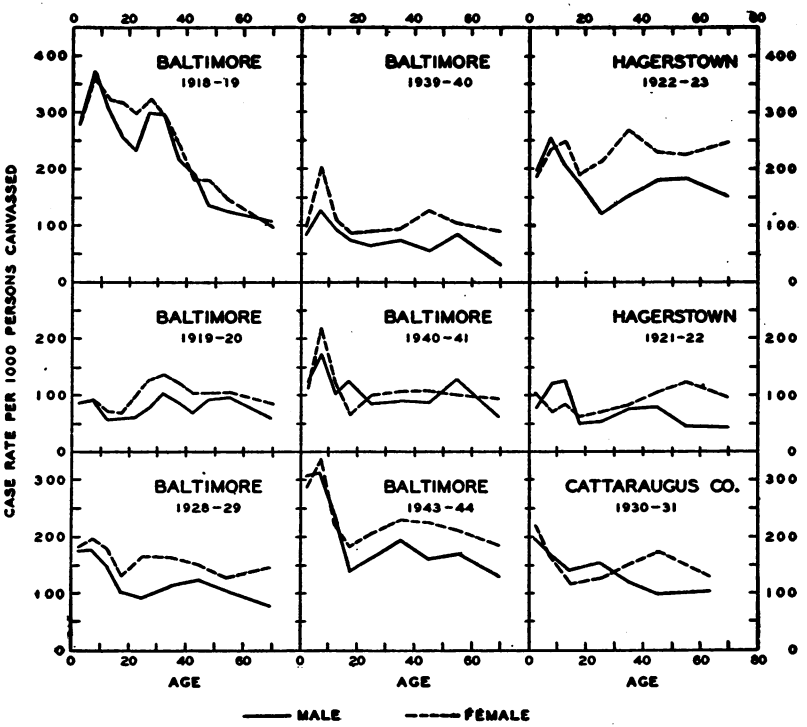

FIGURE 7.—Incidence of certain respiratory diseases among males and females of specific ages during 2- to 4-month epidemic periods—Baltimore and other eastern localities, 1918–44. (Cases include influenza, grippe, pneumonia, and colds in bed.)

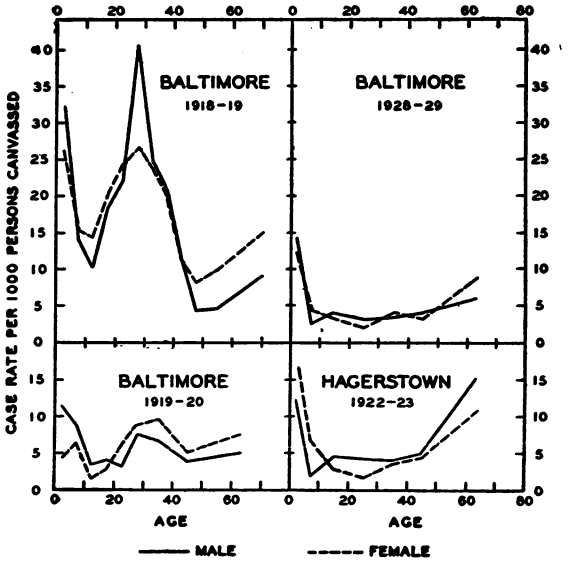

FIGURE 8.—Pneumonia incidence among males and females of specific ages during 2- to 4-month epidemic periods—Baltimore and Hagerstown, Md., 1918–44.

With the exception of the 1918–19 epidemic, when the peak at 25–29 was much higher for males than females, the differences between the sexes are not marked, particularly when one considers the rather small numbers of pneumonia cases on which the curves are based. The Baltimore epidemic of 1919–20 shows somewhat higher pneumonia rates for adult females than males but lower rates for girls than for boys under 15 years. The Hagerstown data for 1922–23 show practically the reverse situation, and the Baltimore data for 1928–29 show no consistent differences between the sexes. In

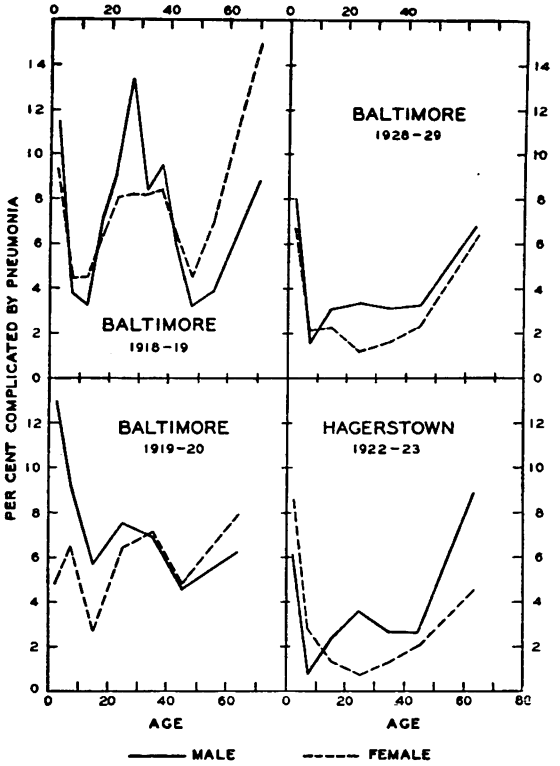

FIGURE 9.—Percentage of cases of certain respiratory diseases which were complicated by pneumonia, among males and females of specific ages—Baltimore and Hagerstown, Md., 1918–44. (Cases include influenza, grippe, pneumonia, and colds in bed.)

the other epidemics, including that of 1943–44, the numbers of pneumonia cases were too few for considering age-specific rates by sex.

Pneumonia complications.—With respect to the percentage of all cases (including bed colds) that were complicated by pneumonia, as shown in figure 9, the differences between the sexes are not consistent. Considering all ages, in 8 of the 11 epidemics the percentage of cases that were complicated by pneumonia was higher for males than females; in 2 epidemics the reverse was true; and in 1 epidemic the percentages were the same for males and female

SUMMARY

Since the 1918–19 influenza pandemic, the United States Public Health Service has collected by house-to-house canvass information about the extent and severity of influenza, grippe, and pneumonia during the various epidemics that have occurred. Of the 18 major or minor outbreaks of influenza that have occurred since the beginning of 1918, data of this kind are available for one or more localities for 12 epidemics. In 6 of these epidemics the data collected refer to Baltimore and in most of the others to surveys of localities in the eastern States. This paper presents age and sex variation in the incidence of influenza and grippe and their complications during these 12 epidemics, with special reference to the current 1943–44 outbreak.

There is great variability in the age curves of influenza and grippe in the several epidemics. The curve in the recent oubreak was in general similar to that of 1928–29 except for a very high incidence among children under 10 years of age. Considering actual rates, the recorded incidence for all ages in the 1943–44 outbreak was higher than in any other epidemic since that of 1918–19; the incidence among children under 10 years of age approximated that in 1918–19, and the incidence above 40 years was greater than in 1918–19 (figs. 1 and 2).

Pneumonia incidence in the current epidemic was far below that of 1918–19; there was no evidence of any young adult peak which was so striking in the great pandemic of 1918–19 and which persisted to a considerable extent in the epidemic of 1919–20. Among persons under 25 years of age the pneumonia rate was less in the current epidemic than in any of the others, but above 25 years the rates corresponded closely to those recorded for the epidemic of 1928–29 (figs. 3 and 4).

The percentage of the total cases that were complicated by pneumonia in the 1943–44 epidemic was far below the figure for any other epidemic for which data are available. Every age group showed this low proportion of cases complicated by pneumonia (figs. 5 and 6).

In most of the epidemics the rates for influenza and grippe were consistently higher for females than males, particularly adult females. However, this was not invariably true; the great 1918–19 epidemic and the minor outbreak of 1940–41 do not show consistent sex differences in the rates (fig. 7).

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DEATHS DURING WEEK ENDED OCTOBER 21, 1944

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

	Week ended Oct. 21, 1944	Corresponding week, 1943
Data for 92 large cities of the United States:		
Total deaths	8,982	8,647
Average for 3 prior years	8,371	
Total deaths, first 42 weeks of year	375,295	382,837
Deaths, under 1 year of age	648	575
Average for 3 prior years	595	
Deaths under 1 year of age, first 42 weeks of year	25,904	27,663
Data from industrial insurance companies:		
Policies in force	66,810,744	65,966,393
Number of death claims	12,706	12,244
Death claims per 1,000 policies in force, annual rate	9.9	9.7
Death claims per 1,000 policies, first 42 weeks of year, annual rate	10.0	9.7

PREVALENCE OF DISEASE

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

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED OCTOBER 28, 1944

Summary

Following last week's interruption in the downward trend begun in the week ended September 9, the incidence of poliomyelitis again declined. A total of 581 cases was reported, as compared with 722 last week, 363 for the corresponding week last year, and a 5-year (1939–43) median of 294. Increases occurred in only 5 of the 15 States reporting more than 9 cases each, as follows (last week's figures in parentheses): *Increases*—New Jersey 30 (26), Illinois 27 (19), Iowa 18 (13), North Carolina 21 (20), Kentucky 14 (11); *decreases*—Massachusetts 21 (32), New York 182 (259), Pennsylvania 36 (48), Ohio 25 (49), Michigan 19 (23), Minnesota 24 (26), Missouri 12 (13), Maryland 17 (19), Virginia 25 (28); *no change*—California 15 (15). The cumulative total is 17,437, as compared with 11,120 for the same period last year and a 5-year median of 7,885.

For the first time in 5 weeks a decrease occurred in the incidence of meningococcus meningitis. The total for the current week is 152 cases, as compared with 175 last week and a 5-year median of 35. States reporting more than 9 cases each are New York (25), Illinois (15), and Ohio (10). The total for the year to date is 14,481, as compared with 15,380 for the same period last year and a 5-year median of 1,705. The cumulative total since the week ended September 9, the week of lowest incidence for the year (110 cases) is 1,000, as compared with 1,358 and 370 for the corresponding 7-week periods of last year and 1942, respectively. The average for the corresponding periods of the years 1938–41 was 208 cases.

Of the current total of 1,549 cases of influenza, slightly more than for corresponding week of any recent year, 1,290 were reported in 3 States—Texas (925), South Carolina (211), and Virginia (154). These States also reported 1,114 of the total of 1,417 cases reported for the corresponding week last year. The cumulative figure since the week ended August 12, the week of lowest incidence, is 9,453, as compared with 10,064 for the same period last year.

A total of 8,998 deaths was recorded in 93 large cities of the United States for the current week, as compared with 9,021 last week and a 3-year (1941–43) average of 8,568. The cumulative figure is 386,218, as compared with 393,647 for the same period last year.

Telegraphic morbidity reports from State health officers for the week ended October 28, 1944, and comparison with corresponding week of 1943 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1939–43	Week ended—		Median 1939–43	Week ended—		Median 1939–43	Week ended—		Median 1939–43
	Oct. 28, 1944	Oct. 30, 1943		Oct. 28, 1944	Oct. 30, 1943		Oct. 28, 1944	Oct. 30, 1943		Oct. 28, 1944	Oct. 30, 1943	
NEW ENGLAND												
Maine	0	0	0	1	------	------	1	46	46	1	3	2
New Hampshire	0	0	0	------	------	------	11	1	1	0	0	0
Vermont	0	0	0	------	------	------	0	66	20	0	0	0
Massachusetts	3	5	5	------	------	------	94	176	159	5	12	2
Rhode Island	0	0	0	12	------	------	2	26	15	1	3	0
Connecticut	0	0	0	------	5	1	1	6	8	4	8	0
MIDDLE ATLANTIC												
New York	11	6	16	[1] 4	[1] 5	[1] 5	31	166	89	25	26	1
New Jersey	10	2	8	2	4	3	12	132	40	4	6	1
Pennsylvania	14	13	13	2	1	------	36	68	112	9	15	5
EAST NORTH CENTRAL												
Ohio	4	15	20	5	2	6	6	262	23	10	4	1
Indiana	18	12	12	8	12	12	4	56	16	4	2	1
Illinois	2	12	12	7	9	8	13	23	23	15	10	2
Michigan [2]	21	10	6	1	------	------	8	255	67	8	7	2
Wisconsin	1	6	1	9	6	18	15	390	53	3	5	1
WEST NORTH CENTRAL												
Minnesota	13	8	3	1	------	1	1	292	12	1	2	1
Iowa	2	2	2	------	------	1	3	7	14	0	3	1
Missouri	4	4	10	5	6	2	1	5	5	5	6	0
North Dakota	1	2	0	------	------	------	2	99	7	0	0	0
South Dakota	0	4	3	------	------	------	4	5	2	2	1	0
Nebraska	3	6	3	1	3	------	6	6	6	1	1	0
Kansas	4	4	4	------	------	1	10	3	16	0	3	0
SOUTH ATLANTIC												
Delaware	1	0	0	------	------	------	0	14	1	0	2	0
Maryland [2]	6	4	5	2	2	2	3	5	5	3	7	1
District of Columbia	0	1	1	2	------	------	2	5	2	2	7	0
Virginia	9	15	46	154	128	128	3	85	29	8	12	1
West Virginia	0	2	14	8	------	2	3	60	2	1	0	0
North Carolina	27	43	85	6	5	3	10	45	45	4	2	2
South Carolina	11	8	30	211	249	201	6	21	4	2	1	1
Georgia	30	19	33	19	17	19	3	13	3	2	3	1
Florida	13	21	8	2	1	2	1	14	2	1	2	1
EAST SOUTH CENTRAL												
Kentucky	6	9	20	------	2	1	4	6	6	1	4	2
Tennessee	14	14	16	15	1	8	5	38	13	1	6	3
Alabama	54	37	41	27	30	30	3	16	3	5	2	1
Mississippi [2]	29	8	14	------	------	------	------	------	------	2	2	1
WEST SOUTH CENTRAL												
Arkansas	21	3	14	19	15	24	0	2	4	0	1	1
Louisiana	41	2	5	------	1	4	4	1	1	1	3	0
Oklahoma	6	2	12	15	20	51	9	4	4	2	0	0
Texas	86	45	47	925	737	503	34	17	17	4	2	0
MOUNTAIN												
Montana	0	1	2	4	------	------	2	70	9	0	0	0
Idaho	0	0	0	2	------	------	5	0	9	1	0	0
Wyoming	4	2	1	------	2	2	0	7	4	0	0	0
Colorado	4	12	9	8	15	15	5	11	16	0	4	0
New Mexico	2	6	1	------	1	1	1	1	6	2	1	0
Arizona	1	3	5	44	79	65	2	5	14	0	1	0
Utah [2]	0	0	0	2	------	1	4	3	6	0	2	0
Nevada	0	0	0	------	------	------	0	1	0	0	1	0
PACIFIC												
Washington	19	9	2	------	31	------	28	25	25	2	7	1
Oregon	7	2	2	8	9	9	35	23	18	1	1	1
California	35	30	23	18	19	28	152	57	57	9	8	3
Total	537	409	596	1,549	1,417	1,330	585	2,639	1,435	152	198	35
43 weeks	10,234	10,712	12,027	347,567	91,225	156,89[1]	595,989	551,026	474,381	14,481	15,380	1,705

[1] New York City only. [2] Period ended earlier than Saturday.

Telegraphic morbidity reports from State health officers for the week ended October 28, 1944, and comparison with corresponding week of 1943 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever [3]		
	Week ended—		Median 1939–43	Week ended—		Median 1939–43	Week ended—		Median 1939–43	Week ended—		Median 1939–43
	Oct. 28, 1944	Oct. 30, 1943		Oct. 28, 1944	Oct. 30, 1943		Oct. 28, 1944	Oct. 30, 1943		Oct. 28, 1944	Oct. 30, 1943	
NEW ENGLAND												
Maine	0	0	0	34	17	11	0	0	0	1	0	1
New Hampshire	0	0	0	3	8	8	0	0	0	0	0	0
Vermont	0	1	1	9	10	10	0	0	0	0	2	0
Massachusetts	21	7	5	131	121	108	0	0	0	5	4	3
Rhode Island	0	5	0	8	1	3	0	0	0	0	0	0
Connecticut	8	7	2	26	31	21	0	0	0	0	1	1
MIDDLE ATLANTIC												
New York	182	26	26	173	168	163	0	0	0	3	7	8
New Jersey	30	4	5	38	48	59	0	0	0	5	1	1
Pennsylvania	36	6	6	140	139	115	0	0	0	11	3	7
EAST NORTH CENTRAL												
Ohio	25	3	8	204	257	171	0	0	0	0	4	5
Indiana	8	4	5	41	67	51	0	1	1	0	1	1
Illinois	27	38	12	153	108	160	1	0	1	3	2	13
Michigan [3]	19	17	17	97	117	119	0	0	0	1	1	4
Wisconsin	5	13	4	60	126	104	0	0	0	1	1	1
WEST NORTH CENTRAL												
Minnesota	24	7	13	46	61	57	0	0	0	0	0	1
Iowa	18	4	4	38	57	57	0	0	1	0	5	2
Missouri	12	0	1	30	33	44	0	0	0	1	2	2
North Dakota	0	1	1	5	9	9	0	0	0	0	0	0
South Dakota	0	0	2	17	12	20	0	0	0	1	1	1
Nebraska	4	3	3	24	43	22	0	0	0	0	0	0
Kansas	4	21	11	74	55	59	0	0	0	2	0	1
SOUTH ATLANTIC												
Delaware	8	0	0	0	1	7	0	0	0	1	1	2
Maryland [2]	17	1	1	58	35	32	0	0	0	1	0	6
District of Columbia	6	2	0	14	18	13	0	0	0	0	0	0
Virginia	25	1	2	80	34	52	0	0	0	3	6	9
West Virginia	8	0	1	78	63	51	0	0	0	1	1	3
North Carolina	21	1	1	52	113	123	0	1	0	2	2	3
South Carolina	4	0	1	13	13	13	0	0	0	0	0	8
Georgia	1	0	1	30	49	38	0	0	0	7	4	8
Florida	4	0	1	13	11	7	0	0	0	4	0	1
EAST SOUTH CENTRAL												
Kentucky	14	6	5	26	50	62	0	0	0	5	4	5
Tennessee	4	0	1	94	38	80	0	0	0	2	4	6
Alabama	4	3	4	36	38	38	0	0	0	2	5	7
Mississippi [2]	2	0	2	23	11	14	0	1	0	0	5	4
WEST SOUTH CENTRAL												
Arkansas	0	0	2	20	7	7	0	0	0	3	0	6
Louisiana	4	0	1	15	8	8	0	0	0	9	0	6
Oklahoma	1	8	0	20	8	20	0	0	1	0	1	4
Texas	7	19	7	75	41	41	0	0	1	10	8	12
MOUNTAIN												
Montana	0	0	0	20	31	18	1	0	0	1	0	0
Idaho	0	2	2	82	13	13	3	0	0	2	0	0
Wyoming	0	1	0	3	1	3	0	0	0	0	0	0
Colorado	1	8	2	46	21	21	2	0	0	2	0	5
New Mexico	0	2	1	7	6	6	0	0	0	2	3	2
Arizona	0	3	1	10	15	1	0	0	0	3	1	1
Utah [2]	0	15	7	3	13	10	0	0	0	0	0	0
Nevada	0	2	0	3	1	0	0	0	0	0	0	0
PACIFIC												
Washington	9	37	6	38	61	28	0	0	0	5	2	2
Oregon	3	27	3	36	19	13	0	0	1	2	2	2
California	15	58	21	166	148	103	0	0	0	2	4	5
Total	581	363	294	2,412	2,355	2,284	7	3	14	103	88	178
43 weeks	17,437	11,120	7,885	160,516	113,474	113,474	336	648	1,244	4,786	4,827	7,419

[2] Period ended earlier than Saturday.

[3] Including paratyphoid fever cases reported separately as follows: Maine, 1; Massachusetts, 5; New Jersey, 1; Delaware, 1; Georgia, 1; Florida, 1; Louisiana, 1; Colorado, 2.

Telegraphic morbidity reports from State health officers for the week ended October 28, 1944, and comparison with corresponding week of 1943 and 5-year median—Con.

Division and State	Whooping cough			Week ended October 28, 1944									
	Week ended—		Median 1939–43	Anthrax	Dysentery			Encephalitis, infectious	Leprosy	Rocky Mt. spotted fever	Tularemia	Typhus fever
	Oct. 28, 1944	Oct. 30, 1943			Amebic	Bacillary	Unspecified					
NEW ENGLAND												
Maine	7	8	19	0	0	0	0	0	0	0	0	0
New Hampshire	3	1	2	0	0	0	0	0	0	0	0	0
Vermont	16	27	24	0	0	0	0	0	0	0	0	0
Massachusetts	43	87	134	0	0	7	0	0	0	0	0	0
Rhode Island	2	13	13	0	0	0	0	0	0	0	0	0
Connecticut	52	32	54	0	0	5	0	0	0	0	0	0
MIDDLE ATLANTIC												
New York	199	250	387	0	1	61	0	1	1	2	0	0
New Jersey	79	69	131	0	0	0	0	1	0	0	0	0
Pennsylvania	123	154	238	0	0	0	0	0	0	1	0	0
EAST NORTH CENTRAL												
Ohio	77	86	169	0	0	0	0	0	0	0	0	0
Indiana	11	16	19	0	1	0	0	1	0	0	0	0
Illinois	91	137	171	0	0	1	0	0	0	0	1	0
Michigan [2]	50	128	154	0	1	19	0	0	0	0	0	0
Wisconsin	77	175	168	0	0	0	0	1	0	0	0	0
WEST NORTH CENTRAL												
Minnesota	53	55	55	0	1	0	0	0	0	0	0	0
Iowa	2	22	18	0	1	0	0	0	0	0	0	0
Missouri	25	16	22	0	0	0	2	0	0	0	0	0
North Dakota	6	8	8	0	0	0	7	0	0	0	0	0
South Dakota	20	5	0	0	0	0	0	0	0	0	0	0
Nebraska	9	21	9	0	0	0	0	0	0	0	0	0
Kansas	18	39	35	0	4	0	0	1	0	0	0	0
SOUTH ATLANTIC												
Delaware	5	0	4	0	0	0	0	0	0	0	0	0
Maryland [2]	81	31	56	0	0	0	3	0	0	0	0	0
District of Columbia	6	10	12	0	0	0	0	0	0	0	0	0
Virginia	24	58	35	0	0	0	86	0	0	1	0	0
West Virginia	13	2	22	0	0	0	0	0	0	0	0	0
North Carolina	50	130	61	0	0	0	0	0	0	0	0	11
South Carolina	27	32	21	0	0	0	0	0	0	0	0	5
Georgia	6	9	9	0	0	1	0	0	0	0	1	33
Florida	3	19	6	0	3	1	0	1	0	0	0	13
EAST SOUTH CENTRAL												
Kentucky	12	64	64	0	0	9	0	0	0	0	0	0
Tennessee	17	27	35	0	0	0	1	0	0	0	1	5
Alabama	20	6	28	0	0	0	0	0	0	0	0	26
Mississippi [2]	----	----	----	0	0	0	0	0	0	0	0	7
WEST SOUTH CENTRAL												
Arkansas	16	25	14	0	2	1	0	0	0	0	0	0
Louisiana	0	1	5	0	0	1	0	0	0	0	2	13
Oklahoma	2	1	5	0	0	0	8	0	0	0	0	0
Texas	127	68	69	0	23	505	1	0	0	0	1	48
MOUNTAIN												
Montana	25	23	18	0	1	0	0	0	0	0	0	0
Idaho	15	0	2	0	0	0	0	0	0	0	0	0
Wyoming	5	10	8	0	0	0	0	0	0	0	0	0
Colorado	2	52	27	0	0	0	0	0	0	0	0	0
New Mexico	5	3	8	0	0	4	5	0	0	0	0	0
Arizona	7	15	10	0	0	0	25	0	0	0	0	0
Utah [2]	15	16	16	0	0	0	0	0	0	0	0	0
Nevada	0	0	0	0	0	0	0	0	0	0	0	0
PACIFIC												
Washington	6	87	56	0	0	1	0	1	0	0	0	0
Oregon	6	54	14	0	0	0	0	0	0	0	1	0
California	87	85	155	0	2	8	0	5	1	0	0	0
Total	1,545	2,177	2,597	0	40	624	138	12	2	4	7	161
Same week 1943	2,177	----	----	3	33	277	83	6	1	5	8	109
Same week 1942	2,597	----	----	2	35	170	135	16	1	4	3	112
43 weeks 1944	79,434	----	----	37	1,524	19,750	7,631	564	27	444	471	4,292
43 weeks 1943	156,828	----	----	56	1,779	13,982	6,674	592	24	425	689	3,588
43 weeks 1942	149,727	----	[4] 150,098	70	1,032	10,802	5,965	482	40	[4] 445	744	[4] 2,392

[2] Period ended earlier than Saturday.

[4] 5-year median 1939–43.

WEEKLY REPORTS FROM CITIES

City reports for week ended October 21, 1944

This table lists the reports from 90 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urgan incidence of the diseases linclnded in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland	0	0	------	0	0	0	2	0	3	0	0	1
New Hampshire:												
Concord	0	0	------	0	0	0	1	0	1	0	0	0
Vermont:												
Barre	0	0	------	0	0	0	1	0	0	0	0	0
Massachusetts:												
Boston	0	0	------	0	43	3	13	13	28	0	1	20
Fall River	0	0	------	0	0	0	1	0	1	0	0	5
Springfield	0	0	------	0	1	0	2	0	5	0	0	1
Worcester	0	0	------	0	3	0	7	4	21	0	0	10
Rhode Island:												
Providence	2	0	------	0	0	0	3	0	5	0	0	8
Connecticut:												
Bridgeport	0	0	------	0	0	2	0	1	6	0	0	1
Hartford	0	0	------	0	4	1	1	0	1	0	0	2
New Haven	0	0	1	0	0	1	1	1	4	0	0	14
MIDDLE ATLANTIC												
New York:												
Buffalo	0	0	------	0	0	0	7	5	2	0	1	2
New York	9	2	2	1	8	17	68	98	70	0	5	72
Rochester	0	0	------	0	3	3	0	12	0	0	0	9
Syracuse	0	0	------	0	0	0	0	0	4	0	0	1
New Jersey:												
Camden	0	0	------	0	0	0	1	2	0	0	0	0
Newark	0	0	------	0	1	2	4	0	2	0	0	1
Trenton	0	0	------	0	0	0	3	2	0	0	0	0
Pennsylvania:												
Philadelphia	3	0	5	1	4	4	34	6	36	0	4	16
Pittsburgh	0	0	2	2	1	3	8	0	11	0	0	8
Reading	0	0	------	0	1	0	1	0	0	0	0	1
EAST NORTH CENTRAL												
Ohio:												
Cincinnati	0	0	------	0	0	2	2	4	23	0	0	7
Cleveland	0	0	1	0	1	5	8	16	17	0	2	11
Columbus	0	0	2	2	1	1	1	0	2	0	0	4
Indiana:												
Fort Wayne	0	0	------	0	0	0	2	0	0	0	0	0
Indianapolis	3	0	------	3	1	2	10	2	8	0	0	2
South Bend	6	0	------	0	0	0	0	0	1	0	0	0
Terre Haute	0	0	------	0	1	0	3	0	0	0	0	0
Illinois:												
Chicago	0	0	25	3	16	4	22	4	33	0	0	35
Springfield	0	0	------	0	3	2	0	0	3	0	0	0
Michigan:												
Detroit	12	20	------	1	3	2	12	8	20	0	2	13
Flint	0	0	------	0	0	0	3	0	0	0	0	0
Grand Rapids	0	0	------	0	0	0	0	1	9	0	0	0
Wisconsin:												
Kenosha	0	0	------	0	0	0	0	0	0	0	0	8
Milwaukee	0	0	------	0	0	1	3	0	7	0	0	12
Racine	0	0	------	0	1	0	0	0	3	0	0	1
Superior	0	0	------	0	0	0	0	0	1	0	0	0
WEST NORTH CENTRAL												
Minnesota:												
Duluth	0	0	------	0	0	2	0	5	2	0	0	2
Minneapolis	14	0	------	0	1	1	6	7	4	0	0	2
St. Paul	0	0	------	0	0	0	2	2	8	0	0	22

See footnotes at end of table.

City reports for week ended October 21, 1944—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
Missouri:												
Kansas City	0	0	------	0	1	2	1	0	5	0	0	1
St. Joseph	0	0	------	0	0	0	0	0	1	0	0	0
St. Louis	0	0	1	2	0	5	13	3	10	0	2	10
North Dakota:												
Fargo	1	0	------	0	0	0	0	0	1	0	0	0
Nebraska:												
Omaha	0	0	------	0	2	0	4	0	1	0	1	0
Kansas:												
Topeka	0	0	------	0	0	1	0	0	4	0	0	2
Wichita	0	0	------	0	0	0	0	0	2	0	0	0
SOUTH ATLANTIC												
Delaware:												
Wilmington	0	0	------	0	0	1	6	3	0	0	0	0
Maryland:												
Baltimore	4	0	------	0	2	1	4	6	14	0	0	63
Cumberland	0	0	------	0	0	0	0	0	0	0	0	0
Frederick	0	0	------	0	0	0	0	0	0	0	0	0
District of Columbia:												
Washington	0	0	1	0	3	0	9	9	9	0	0	10
Virginia:												
Lynchburg	0	0	------	0	0	0	0	1	0	0	0	0
Richmond	1	0	1	0	0	0	1	3	5	0	0	0
Roanoke	0	0	------	0	0	0	2	0	1	0	0	0
West Virginia:												
Charleston	0	0	------	0	0	0	0	0	5	0	0	0
Wheeling	0	0	------	0	0	0	1	0	1	0	0	0
North Carolina:												
Raleigh	0	0	------	0	0	0	1	0	2	0	0	1
Wilmington	4	0	------	0	0	0	2	1	3	0	0	6
Winston-Salem	0	0	------	0	2	0	1	0	8	0	0	3
South Carolina:												
Charleston	0	0	4	0	0	0	1	0	2	0	0	0
Georgia:												
Atlanta	0	0	11	0	1	0	4	1	3	0	0	0
Brunswick	0	0	------	0	3	0	0	0	0	0	0	0
Savannah	0	0	------	0	0	0	0	0	0	0	0	0
Florida:												
Tampa	2	0	1	0	0	0	0	0	1	0	1	0
EAST SOUTH CENTRAL												
Tennessee:												
Memphis	1	0	------	0	2	2	4	0	7	0	1	3
Nashville	0	0	------	0	0	0	0	0	3	0	0	0
Alabama:												
Birmingham	0	0	2	0	0	0	5	0	1	0	0	0
Mobile	1	0	1	0	0	0	0	0	2	0	0	0
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock	1	0	------	0	0	0	0	0	1	0	0	0
Louisiana:												
New Orleans	4	0	------	0	1	0	13	6	5	0	0	0
Shreveport	2	0	------	0	0	0	2	0	0	0	0	0
Texas:												
Dallas	5	0	------	0	0	0	2	0	3	0	1	1
Galveston	0	0	------	0	0	0	0	0	0	0	0	0
Houston	7	1	------	0	0	0	5	1	8	0	2	3
San Antonio	0	0	1	1	0	0	1	0	3	0	0	0
MOUNTAIN												
Montana:												
Billings	0	0	------	0	1	0	3	0	0	0	0	3
Great Falls	1	0	------	0	0	0	1	1	7	0	0	0
Helena	0	0	------	0	0	0	1	0	0	0	0	0
Missoula	0	0	------	0	1	1	0	0	0	0	0	0

See footnotes at end of table.

City reports for week ended October 21, 1944—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
MOUNTAIN—ocntinued												
Idaho:												
Boise	0	0	------	0	0	0	0	0	0	0	0	0
Colorado:												
Denver	1	0	2	0	1	0	5	0	9	0	0	3
Pueblo	0	0	------	0	0	0	0	0	4	0	0	0
Utah:												
Salt Lake City	0	0	------	0	2	0	3	0	4	0	0	1
PACIFIC												
Washington:												
Seattle	0	0	------	0	5	0	5	2	5	0	1	0
Spokane	0	0	------	0	4	0	1	1	1	0	0	0
Tacoma	0	0	------	0	0	0	1	0	0	0	0	1
California:												
Los Angeles	13	0	1	0	6	3	2	1	40	0	1	7
Sacramento	1	2	1	0	3	0	0	0	4	0	0	2
San Francisco	0	0	------	0	11	0	7	2	11	0	0	0
Total	98	25	65	16	148	74	343	234	537	0	25	405
Corresponding week, 1943	70	------	44	10	516	------	336	------	616	0	18	634
Average, 1939–43	86	------	63	[1] 18	[2] 318	------	[1] 303	------	517	0	28	930

[1] 3-year average, 1941–43.
[2] 5-year median, 1939–43.

Dysentery, amebic.—Cases: Boston, 2; New York, 2; Chicago, 6; Detroit, 1; Atlanta, 1; Tampa, 1; Nashville, 1.
Dysentery, bacillary.—Cases: Providence, 2; New Haven, 1; New York, 14; Rochester, 2; Syracuse, 14; Detroit, 11; St. Louis, 2; Charleston, S. C., 9; Shreveport, 1; Los Angeles, 12; San Francisco, 1.
Dysentery, unspecified.—Cases: Richmond, 3.
Tularemia.—Cases: St. Louis, 1.
Typhus fever, endemic.—Cases: Wilmington, N. C., 3; Charleston, S. C., 2; Savannah, 5; Memphis, 1; Mobile, 2; Dallas, 1; Galveston, 1; Houston, 8; San Antonio, 2; Los Angeles, 1.

Rates (annual basis) per 100,000 population, by geographic groups, for the 90 cities in the preceding table (estimated population, 1943, 34,394,800)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Poliomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England	5.2	0.0	2.6	0.0	133	18.3	83.6	49.7	196	0.0	2.6	162
Middle Atlantic	5.6	0.9	4.2	1.9	8	13.4	58.3	57.9	58	0.0	4.6	51
East North Central	12.8	12.2	17.0	5.5	16	11.6	40.1	21.3	77	0.0	2.4	57
West North Central	29.8	0.0	2.0	4.0	8	21.9	51.7	33.8	76	0.0	6.0	78
South Atlantic	18.0	0.0	29.4	0.0	18	3.3	52.3	39.2	88	0.0	1.6	126
East South Central	11.8	0.0	17.7	0.0	12	11.8	53.1	0.0	77	0.0	5.9	18
West South Central	54.5	2.9	2.9	2.9	3	0.0	66.0	20.1	57	0.0	8.6	11
Mountain	15.9	0.0	15.9	0.0	40	7.9	103.3	7.9	191	0.0	0.0	56
Pacific	22.1	3.2	3.2	0.0	46	4.7	25.3	9.5	96	0.0	3.2	16
Total	14.9	3.8	9.9	2.4	22	11.2	52.1	35.6	82	0.0	3.8	62

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended October 7, 1944.—During the week ended October 7, 1944, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox		10		32	61	9	7	18	17	154
Diphtheria		5		39	1	6	2			53
Dysentery (bacillary)				20		16	1		4	41
German measles				24	9	1	1	1	9	45
Influenza		3	2		14	3			14	36
Measles			26	38	24	16	2	3	17	126
Meningitis, meningococcus		1	1	1	2	1				6
Mumps		1		59	28	9	1	25	14	137
Poliomyelitis		1		3	17	7	4	3		35
Scarlet fever		16	18	86	62	20	2	16	20	240
Tuberculosis (all forms)		1	6	129	29	7		10	51	233
Typhoid and paratyphoid fever			4	16	4	1		1		26
Undulant fever				1						1
Venereal diseases:										
Gonorrhea	3	30	9		73	35	33	36	37	256
Syphilis	1	19	9		71	13	9	19	13	154
Whooping cough		15	1	61	22	8	3	12	16	138

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual incidence, only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A table showing the accumulated figures for these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

(Few reports are available from the invaded countries of Europe and other nations in war zones.)

Plague

Algeria.—Plague has been reported in Algeria as follows: Algiers, October 1–10, 1944, 5 cases; Maison Carree—September 21–30, 1944, 1 case, October 1–10, 1944, 2 cases.

Belgian Congo—Stanleyville Province—Blukwa region.—During the week ended September 30, 1944, 2 cases of plague were reported in Blukwa region, Stanleyville Province, Belgian Congo.

Madagascar.—For the period September 11–20, 1944, 4 cases of plague were reported in Madagascar.

Palestine—Plague-infected rats.—For the period June 20 to August 31, 1944, a total of 84 plague-infected rats were reported in Palestine, including 4 plague-infected rats taken from an unnamed vessel in the port of Haifa.

Senegal.—For the period September 11–20, 1944, 8 cases of plague with 7 deaths were reported in Senegal.

Smallpox

Panama (Republic)—Chiriqui Province.—For the month of September 1944, 1 case of smallpox was reported in the Province of Chiriqui, Republic of Panama.

Typhus Fever

Algeria.—For the period October 1–10, 1944, 8 cases of typhus fever were reported in Algeria.

Egypt.—For the week ended September 23, 1944, 31 cases of typhus fever with 4 deaths were reported in Egypt.

Guatemala.—For the month of September 1944, 117 cases of typhus fever with 15 deaths, were reported in Guatemala. Departments reporting the highest incidence are: Alta Verapaz, 32 cases, 3 deaths; Chimaltenango, 16 cases, 1 death; El Quiche, 16 cases, 1 death; Quetzaltenango, 31 cases, 5 deaths.

Hungary.—For the week ended September 23, 1944, 9 cases of typhus fever (including 1 case in Subcarpathia) were reported in Hungary.

Peru.—During the month of August 1944, 79 cases of typhus fever were reported in Peru. Departments reporting the highest incidence are: Arequipa, 14 cases; Cuzco, 28 cases; Puno, 11 cases.

Slovakia.—For the 2 weeks ended August 12, 1944, 3 cases of typhus fever were reported in Slovakia.

Yellow Fever

Venezuela—Tachira State—Riecito.—According to information dated October 16, 1944, 1 case of yellow fever was reported in Riecito, near Colon, Tachira State, Venezuela. Vaccination is being administered.

COURT DECISIONS ON PUBLIC HEALTH

Venereal disease—vagrancy charge held insufficient basis for reasonable suspicion of infection.—(Alabama Supreme Court; *State* v. *Hutchinson*, 18 So.2d 723; decided June 29, 1944.) In a habeas corpus proceeding the essentials of an agreed statement of facts were as follows: The petitioner was arrested by the sheriff of Houston County, Ala., and confined in the county jail; the charge against him was vagrancy and his appearance bond was fixed at $300; before a bond was presented

by the petitioner, the sheriff received an order of detention from the county health officer; after receiving such order the sheriff had presented to him by the petitioner and took and approved an appearance bond but continued to detain the petitioner in the county jail solely because of the health officer's order; as soon as the detention order was issued the health officer promptly proceeded to examine the petitioner for venereal diseases, taking blood specimens and doing such other things as were necessary to complete an examination; after such examination it was necessary for the health officer to send certain specimens of petitioner's blood for examination by the State department of health as there were no local facilities for conducting such examination; the said specimens were promptly forwarded to the State health department but the results of the department's examination had not been obtained because a reasonable time had not elapsed within which to report the results; the sheriff's position was that there was no State law permitting the petitioner to make bond in the circumstances involved and that he had to hold the petitioner in custody and confine him to the county jail until he was ordered released by the county health officer.

The lower court granted the writ of habeas corpus and the State appealed. The Supreme Court of Alabama held that the petitioner was entitled to his discharge because the State statutes did not authorize his detention under the agreed statement of facts. One of the statutes referred to by the appellate court provided that "whenever or wherever apprehended, prostitutes and other persons whom the county health officer has probable cause to believe infected with a venereal disease shall be examined for said infection by the health officer or his assistant." However, the court pointed out that in the instant case the petitioner was arrested on a charge of vagrancy, that in defining vagrants the statute listed 13 different classes of persons as such, but that at most only 2 or 3 of the classes named were persons of whom it could be said that there were reasonable grounds to suspect that they were affected with a contagious or infectious disease. "In other words," said the court, "a charge of vagrancy alone is not enough upon which to rest a reasonable suspicion that the person arrested is affected with a contagious or infectious disease." Nowhere in the statutes, according to the court, was it provided that a person suspected of having a contagious or infectious disease could be confined in jail. It was not even provided that one so infected could be confined in jail except in the case of a venereally infected person who refused to take and continue treatment.

The order or judgment of the lower court granting the writ was affirmed.

Venereal diseases—quarantine—statutory provisions upheld.—(Texas Court of Criminal Appeals; *Ex parte James*, 181 S. W. 2d 83; decided May 10, 1944, rehearing denied June 21, 1944.) The relator in her application for a writ of habeas corpus alleged that she was being illegally confined and restrained of her liberty by the chief of police of the city of Beaumont. The record showed that she was held by virtue of a warrant of arrest and quarantine alleging that she was afflicted with a communicable disease. This warrant was issued out of the office of the city health officer as provided by article 4445 of the Revised Civil Statutes of Texas which dealt with measures for the control and prevention of the spread of venereal diseases. The lower court denied the relief sought and the relator appealed to the Texas Court of Criminal Appeals.

From the briefs filed in behalf of the appellant it was apparent, according to the appellate court, that reliance was had upon the contention that article 4445 was unconstitutional. The court said that it recognized the force of the argument made but felt that the decisions of that court and others on the subject had been overlooked and that the question had been definitely settled upon many occasions and with good reasoning supported by authorities of other States "in which the police power of the State was of necessity extended to the question involved in no uncertain manner." The Government's right to quarantine against communicable diseases was stated to be as vital to human existence as the law of self-defense. "The right has been upheld and the legislation construed to meet the emergencies of the diseases named in the legislation." The court could not agree that other provisions of the State constitution might destroy this power.

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