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STATE OF CONNECTICUT

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THIRTY-SIXTH REPORT

(42d AND 43d YEARS)

OF THE

STATE DEPARTMENT OF HEALTH

FOR TWO YEARS ENDING JUNE 30, 1920

JOHN T. BLACK, M.D., Commissioner



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INFLUENZA EPIDEMIC OF 1918-1919

The great pandemic of influenza spread from Europe to this country in 1918 and Connecticut was one of the first states stricken by the disease because of its location on the Atlantic coast.

Influenza—or “Spanish Influenza,” to use the popular term—appeared in Massachusetts among sailors at the U. S. Receiving Ship on Commonwealth pier, Boston, Mass., August 28, 1918; and similarly the first cases in Connecticut were U. S. Navy patients, several cases being reported on September 1st from the Naval Hospital at New London. The early cases were taken from ships arriving from foreign ports. During the next few days, cases appeared among the personnel of the U. S. Submarine Base in Groton, two miles north of New London, and later it spread to the civilian population.

This resulted in the disease being made a “reportable disease” by the State Department of Health on September 12th, 1918, in New London County, and throughout Connecticut on September 18th, 1918.

The epidemic prevailed with a far greater severity than ever before, sweeping the state in two distinct waves which reached their crests in October and December-January, 1919.

Past History of Influenza in Connecticut

Epidemic influenza has been present in Connecticut at different periods in the past. It has been shown by different investigators that a marked increase in pneumonia deaths occurs simultaneously with influenza when the latter prevails in epidemic form.

The earliest records in Connecticut on deaths from la grippe or influenza are in 1889, when four deaths were recorded in the state. Since that time, a study of statistics discloses at least seven periods during which influenza was unusually prevalent and may be termed epidemic.

The deaths from influenza and pneumonia in Connecticut since 1879 are given in this report and the high number of pneumonia deaths in 1883, 1885, and 1888 suggests the presence of influenza in those years as a contributing factor toward the great number of deaths from pneumonia.

Deaths from Influenza and Pneumonia

Year	Influenza	Pneumonia (all forms)	Year	Influenza	Pneumonia (all forms)
1879	...	626	1901	668	1,301
1880	...	712	1902	161	1,217
1881	...	713	1903	362	1,386
1882	...	804	1904	409	1,440
1883	...	905	1905	237	1,495
1884	...	694	1906	207	1,586
1885	...	1,025	1907	522	1,739
1886	...	837	1908	396	1,370
1887	...	963	1909	193	1,537
1888	...	1,107	1910	264	1,768
1889	4	915	1911	299	1,722
1890	185	1,430	1912	174	1,757
1891	366	1,442	1913	213	1,855
1892	564	1,493	1914	177	1,902
1893	252	1,465	1915	209	1,936
1894	214	1,118	1916	526	2,553
1895	275	1,289	1917	360	2,661
1896	118	1,361	1918	7,602	2,991
1897	161	1,284	1919	1,583	1,632
1898	200	1,092			
1899	660	1,058			
1900	667	1,504			

From this table it is seen that influenza or "la grippe" was unduly prevalent in Connecticut in the following periods, 1890-1892, 1895, 1898-1901, 1903-1904, 1907-1908, 1910-1911, 1916-1919. In looking backward, it is odd that the great increase in deaths due to influenza and pneumonia was passed by almost without comment in 1916 and 1917, the two years prior to the great pandemic in 1918-1919. The exact relationship that the unusually high death rate for those two years bears to the 1918 epidemic is not apparent, nor has any reasonable explanation been put forth by those who have studied this problem.

Unfortunately, influenza was not a reportable disease in any state prior to 1918, so a comparison is not possible therefore on its morbidity in the past. However, the mortality records disclose the great number of deaths in 1899-1901, the number greatly exceeding the 1890-1892 epidemic that is widely heralded as the great epidemic prior to that of 1918. The 660 deaths in 1899, 667 in 1900 and 668 in 1901 indicate clearly that the disease of the fatal type is always present, and again in 1907 the deaths reach a high figure. The year 1916, with 526 deaths, and the corresponding high pneumonia deaths, serve to indicate the fatality of the prevailing type of whatever germ causes influenza. The deaths from pneumonia in 1918 (2,991) exceeded the

1917 deaths but slightly, and the total of pneumonia deaths in 1919 (1,632) was the lowest number since 1909.

This résumé of the incidence of influenza and pneumonia in Connecticut corresponds with the disease in neighboring states.

Epidemic of 1918 and 1919

The influenza epidemic of 1918 and 1919 was the most disastrous epidemic that ever prevailed in Connecticut, taking a toll of 105,056 cases and 7,602 deaths in 1918, and 10,664 cases with 1,583 deaths in 1919. In addition there were in 1918, 2,991 pneumonia deaths (all forms) and in 1919, 1,632 pneumonia deaths (all forms).

Statistics on Influenza and Pneumonia in Connecticut

	1918		1919	
	Cases	Deaths	Cases	Deaths
Influenza	105,056	7,602	10,664	1,583
Pneumonia	2,256*	2,991†	545*	1,632†

* Lobar Pneumonia cases only.

† Pneumonia deaths (all forms).

This epidemic appeared in the United States at the United States Naval Hospital, Chelsea, Mass., August 28, 1918, the first cases being admitted from the U. S. Receiving Ship at Commonwealth Pier, Boston, Mass.

The disease began in Connecticut on or about September 1, 1918, in New London. During the first ten days of September, nearly 100 cases were admitted to the New London Naval Hospital. On September 10th, 300 men arrived at the Government Station on the State Pier from the Boston Navy Yard, and many cases were reported from this Station during the next few days.

The first civilian cases were three men who lived near Fort Trumbull but who worked at the Fort daily.

The disease spread rapidly through the civilian population, as there were nearly 7,000 naval men billeted in civilian homes in and about New London. In New London, there were 901 cases of influenza in September, more than a tenth of the state total of 8,970 cases for that month. In October 936 more cases were reported from the same city.

While the original focus of infection was from ships at New London, other cases appeared throughout the state toward the end of September, who were soldiers on leave from the New England Army Cantonment, Camp Devens, at Ayer, Mass., or among persons who had visited that camp. Wallingford, Winsted, Windham, Hartland, Rockville and Danbury were among the communities that first reported cases of influenza in the state.

Although cases appeared throughout the state during September, there was a distinct wave in the manner by which the epidemic swept Connecticut from east to west, reaching its peak in the eastern part about October 4th, the central area about October 15th, and the Housatonic River Valley about October 24th. This is more clearly shown by counties.

Dates of Maximum Incidence

County	Peak of Epidemic
New London	October 2
Windham	" 5
Tolland	" 9
Middlesex	" 17
New Haven	" 16
Hartford	" 15
Litchfield	" 25
Fairfield	" 23

This indicates in a general way the manner in which the epidemic spread north and west along the methods of contact. It is difficult to understand why New Haven and Fairfield counties did not feel the epidemic effects earlier; for with a direct railroad from New London to Bridgeport, New Haven and New York, one would naturally look for a rapid spread of the disease to these cities. The nearness of Norwich, Willimantic, Putnam, Vernon, and Hartford by means of travel other than railroad, such as state highways and electric road, is probably the answer in part for the northwest spread, together with the economic factors, acting to bring these communities together.

The Disease

The primary symptoms of the disease were sudden onset, severe headache, chills, fever, general weakness, often prostration, pains in the back, sneezing.

Infecting Agent

Influenza was thought to be due to the Pfeiffer's bacillus discovered soon after the pandemic of 1890-92. The present epidemic has produced many conflicting opinions by investigators as to the status of the Pfeiffer's bacillus. Some believe that this organism is the primary cause and other organisms found are secondary invaders of the body, while another group of investigators do not believe that Pfeiffer's bacillus is the cause of influenza. The question is still a debatable one.

Methods of Infection

Influenza is spread by material from the nose and throat of

sick persons or carriers of the virus causing influenza. The virus may be spread by coughing, sneezing, using handkerchiefs, towels, cups, and other articles previously handled by influenza cases or carriers.

The disease rapidly spreads to all parts of a community by persons who are exposed to cases or carriers in gatherings such as street cars, theaters, churches, and the customary groups that gather to discuss the topics of the day.

Effect of Isolation and Quarantine

The epidemic was successfully kept out of institutions where an absolute quarantine was enforced, but as soon as a person from the outside was allowed to enter and come in contact with persons in a quarantined institution, influenza appeared and ran its course. This was shown in several instances, and one or two are given in this report to show the necessity of absolute quarantine or none at all.

Prevention

Publicity by pamphlets, leaflets, folders and lectures warned the public:

1. Not to inhale any person's breath
2. To avoid persons who cough and sneeze
3. Not to visit close and poorly ventilated places
4. To keep warm and dry
5. To remove wet clothes on arriving home
6. Not to use towels, cups and things others have used
7. To protect others, by using a handkerchief when coughing or sneezing
8. To clean one's teeth daily
9. Not to spit on the floor

Incidence of Influenza

Certain of the smaller communities in the state seemed to have been passed over by the epidemic. However, practically every community reported cases, although some were apparently more severely stricken than others.

The cases and deaths from influenza for cities, towns and boroughs are given in the general morbidity and mortality tables of this report.

Morbidity

From returns to the Department from health officers and physicians, apparently from thirty to forty per cent. of the population had influenza of more or less severity.

It was an impossible task to obtain the complete reporting of all cases for physicians were greatly overworked without being overburdened with clerical details.

Cases and Deaths from Influenza and Pneumonia During Epidemic

1918	Influenza		Pneumonia*		Total Deaths, Influenza and Pneumonia (all forms)
	Cases	Deaths	Cases	Deaths	
August	5	11	68	73
September	8,970	305	128	141	446
October	82,057	5,228	1,464	569	5,797
November	6,244	1,077	207	219	1,296
December	7,785	793	224	267	1,060
1919					
January	6,718	758	258	234	992
February	2,232	313	84	226	539
March	1,242	261	52	289	550
April	263	121	27	175	296
May	56	46	19	148	194
Totals	115,567	8,907	2,472	2,336	11,243

* Pneumonia cases include only lobar pneumonia. Pneumonia deaths include all forms.

[The abruptness of the epidemic is clearly indicated by the above table giving the cases and deaths by months from influenza and pneumonia (all forms) in Connecticut during the epidemic period.]

The cases reported, however, serve to indicate the incidence of the disease in the various counties and the degree to which they were affected as is shown in the accompanying table.

In 1918, Windham County had the highest morbidity rate with Middlesex and Tolland Counties tied for second place.

In 1919, Litchfield County felt the effect of the epidemic as it swept westward and had the highest morbidity rate of the counties in the state.

Mortality

The great number of deaths from influenza were not due primarily to the influenza illness, but rather to the succeeding pneumonia that was a complication in many of the cases. It was particularly the pulmonary septicemic form that was the great factor in the high mortality rate. The second wave in December and January showed a lower mortality rate and the cases seemed to present more symptoms of the true influenza as is known under ordinary conditions.

Certain communities, such as Darien, Glastonbury, Milford, Stafford, Wallingford, Stratford, Plainfield, New Milford, Manchester, Hamden, East Hartford, and Berlin, had lower death rates than the majority of communities of over 5,000 population.

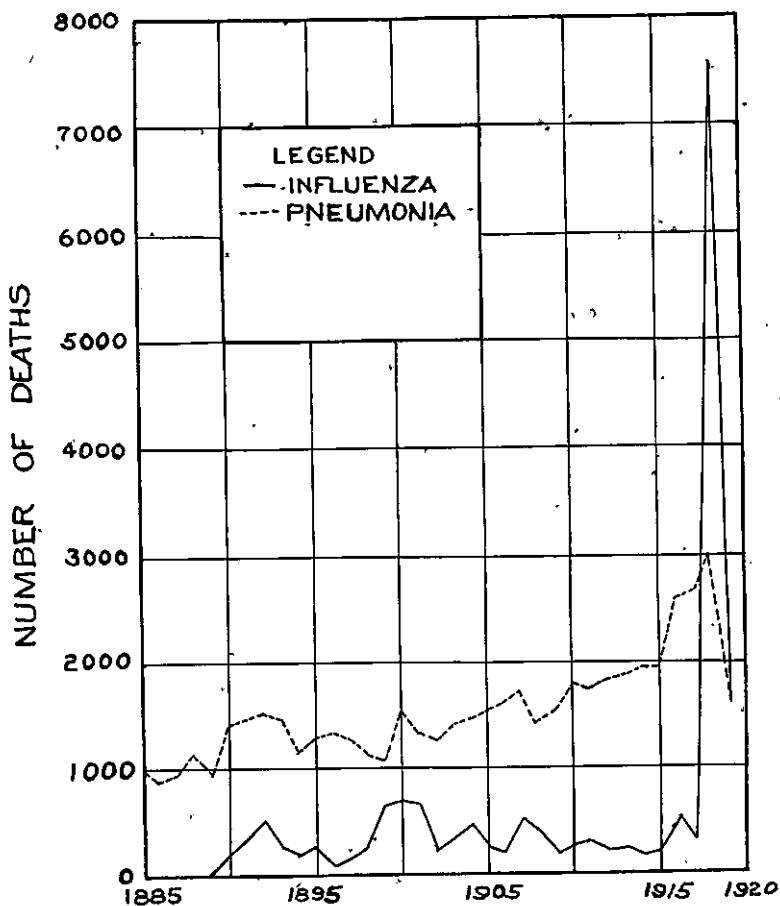
It is noticeable that none of these communities are near New London, the origin of the epidemic in the state at the start, and that the epidemic reached these communities in the first or second week in October after the severer forms of the epidemic had lessened to a certain appreciable extent.

However, New London, Norwich, Windham, West Hartford, Vernon, Seymour, New Britain, Naugatuck, Middletown, Meriden, Hartford, Groton, Derby, Ansonia, and Waterbury, were communities having a higher death rate from influenza and pneumonia.

The area of the Naugatuck-River-Valley including Ansonia, Naugatuck, Derby and Seymour for some reason had a high death rate and are four of the fifteen towns and cities having a death rate of over 2,100 per 100,000 population.

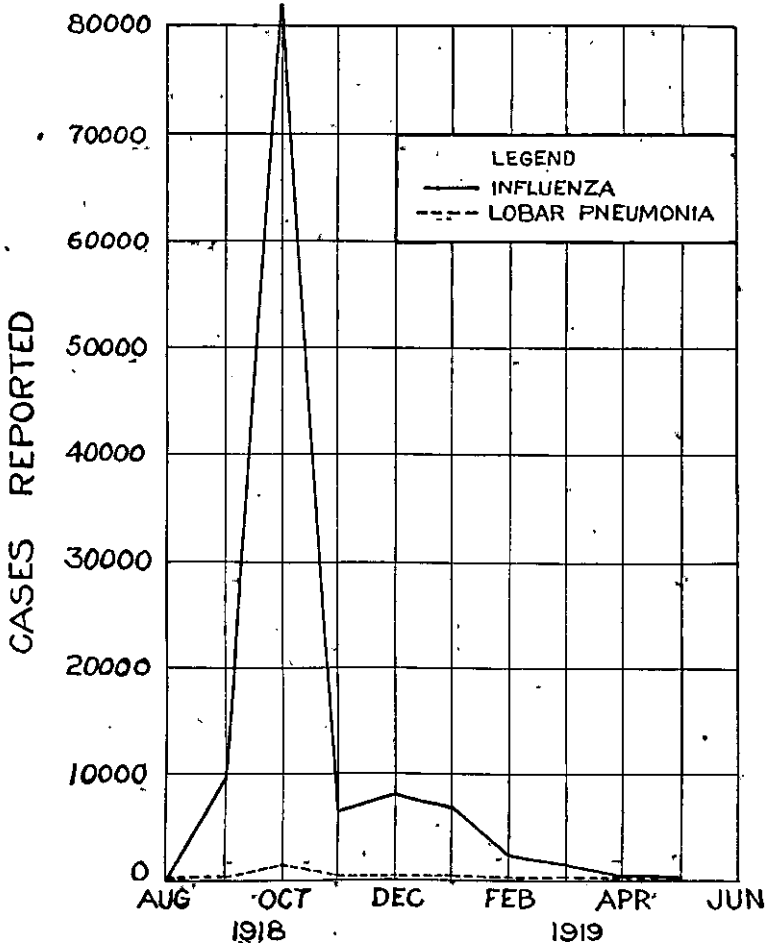
The records show that Windham, Waterbury, Norwich, New London, Middletown, Hartford, and Derby had two or more deaths during the first two weeks of September or during the early stage of the epidemic, or the period at which the virulence of the epidemic was at its height.

The weekly deaths for communities over 5,000 are given in the accompanying table. The communities nearest the original source of invasion, New London, in a general way suffered most, but the second wave of the disease, attacked the towns that had not been greatly affected by the first wave in September and October.

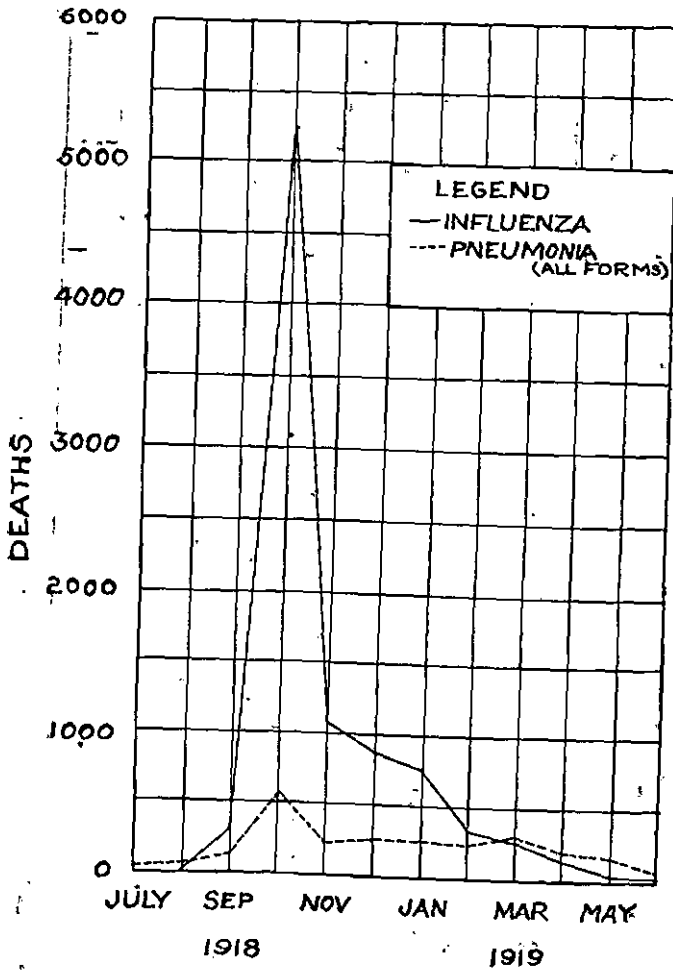
INFLUENZA AND PNEUMONIA (ALL FORMS)
DEATHS IN CONNECTICUT 1885-1919

CONN. STATE DEPT. OF HEALTH

INFLUENZA AND LOBAR PNEUMONIA
IN CONNECTICUT 1918-1919



INFLUENZA AND PNEUMONIA (ALL FORMS) DEATHS IN CONNECTICUT 1918-1919



CONN. STATE DEPT. OF HEALTH

Influenza and Pneumonia in Connecticut by Counties
1918-1919

1918						
Counties	Influenza		Lobar Pneumonia		All forms Pneumonia	Deaths
	Cases	Deaths	Cases	Deaths	Deaths	
Fairfield	18,764	1,475	339	525		826
Hartford	26,037	1,848	305	388		639
Litchfield	6,246	359	169	77		135
Middlesex	6,111	234	118	65		138
New Haven	25,928	2,620	909	500		879
New London	6,294	631	348	143		235
Tolland	3,253	156	41	34		55
Windham	12,423	279	27	58		84
Totals	105,056	7,602	2,256	1,790		2,991
1919						
Counties	Influenza		Lobar Pneumonia		All forms Pneumonia	Deaths
	Cases	Deaths	Cases	Deaths	Deaths	
Fairfield	1,567	357	93	220		405
Hartford	3,235	414	112	199		430
Litchfield	2,244	109	85	37		76
Middlesex	470	42	19	22		59
New Haven	1,494	418	115	242		476
New London	838	171	101	61		120
Tolland	269	30	10	8		26
Windham	547	42	10	12		40
Totals	10,664	1,583	545	801		1,632

(All statistics cover the whole year.)

Morbidity, Mortality and Fatality Rates of Influenza and Pneumonia by Counties

		1918			Pneumonia (Lobar)			Pneumonia all forms
Counties	Population*	Influenza			Morbidity Rate (per 100,000)	Mortality Rate (per 100,000)	Fatality Rate (per cent. re- ported cases)	Mortality Rate (per 100,000)
		Morbidity Rate (per 100,000)	Mortality Rate (per 100,000)	Fatality Rate (per cent. re- ported cases)				
Fairfield	338,344	5,545.83	435.94	7.86	100.19	155.16	154.86	244.13
Litchfield	81,888	7,627.49	438.40	5.74	206.37	94.03	45.56	164.85
Hartford	329,970	7,890.71	560.05	7.09	92.43	117.58	127.21	193.65
Middlesex ...	53,793	11,360.21	435.00	3.82	219.35	120.83	55.08	256.53
New Haven ..	421,043	6,149.27	621.37	10.10	215.58	118.58	55.00	208.47
New London .	102,485	6,141.38	615.69	10.02	339.56	139.53	41.09	229.30
Tolland	28,539	11,398.43	546.62	4.79	143.66	119.13	82.92	192.71
Windham	53,868	23,061.92	517.93	2.24	50.12	107.67	214.81	155.93
		1919						
Fairfield	352,482	444.56	101.28	22.78	26.38	62.41	236.55	114.89
Litchfield	82,989	2,703.97	131.34	4.85	102.42	44.58	43.52	91.57
Hartford	344,695	938.51	120.10	12.79	32.49	57.73	177.67	124.74
Middlesex ...	54,921	855.77	76.47	8.93	34.59	40.05	115.78	167.42
New Haven ..	438,791	340.48	95.26	27.97	26.20	55.15	210.43	108.47
New London .	106,973	783.37	159.85	20.40	94.41	57.02	60.39	112.17
Tolland	29,178	921.92	102.81	11.15	34.27	27.41	80.00	89.10
Windham	54,331	1,006.79	77.39	7.67	18.40	22.08	120.00	73.62

* Populations estimated from State School Census.

Fatality Rate

The incomplete reporting of cases had much to do with the fatality rate of influenza in the different counties.

In 1918, New Haven and New London Counties had a fatality rate of 10 per cent. each, which is a fatality rate approaching that of typhoid fever and is excessively high, even for the epidemic form of influenza. It is probable that the fatality rate of Windham County of 2.2 is indicative of the true rate for this disease. In a similar way, in 1919, the rates of New Haven County, 27.9; Fairfield County, 22.7; New London County, 20.4, are excessively high and indicate a lack of reporting of cases of influenza. This lack of reporting is due to the thousands of cases that occurred in households that were not under the care of a physician, and the householders were in ignorance of the Sanitary Code of the state which provides that they should report cases if a physician is not in attendance.

The fatality rates of 1919 were considerably higher than those of 1918 because of the mildness of the disease, and because of this mildness a larger percentage received home treatment. In 1918 because of the severity of the disease, more cases were attended by physicians and more complete reporting of cases resulted.

Relation of Influenza and Pneumonia Deaths to Total Deaths

During the four months, September to December, inclusive, at the period of the height of the epidemic there were 8,616 deaths from influenza and pneumonia (all forms) out of 15,158 deaths from all causes, or approximately 56.8, were deaths due to the epidemic.

The exact relationship of influenza and pneumonia is not clear. The great number of influenza deaths in 1919 with the low number of pneumonia deaths in the same year would seem to indicate that under certain conditions influenza predisposes to severe pneumonic and septicemic conditions, whereas ordinarily the opposite is true.

The accompanying charts and table cover the period from September 1 to December 28, 1918, for the entire state, and they show the reported cases of influenza by weeks (Fig. 1); reported deaths from influenza and pneumonia by weeks (Fig. 2); deaths from influenza and pneumonia by age groups (Fig. 3); and the number of influenza and pneumonia deaths in individual towns of more than 5,000 population (Fig. 4).

While these tables illustrate the course of the epidemic during its most violent period, they do not show its full effects, for many thousands of cases, resulting in upwards of two thousand deaths, occurred in this state during the first four months of the present year.

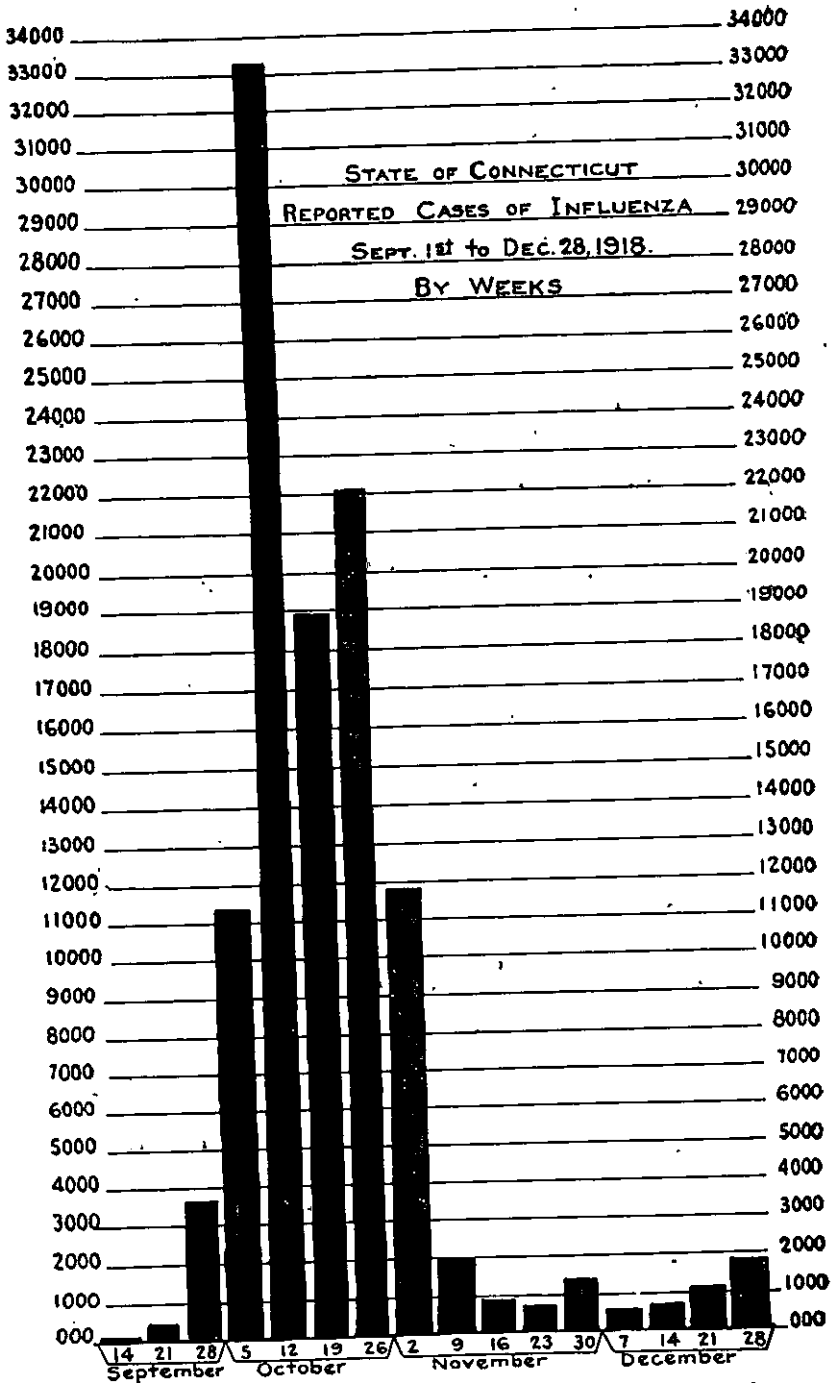


FIG. 1.—Reported Cases of Influenza, Sept. 1 to Dec. 28, 1918

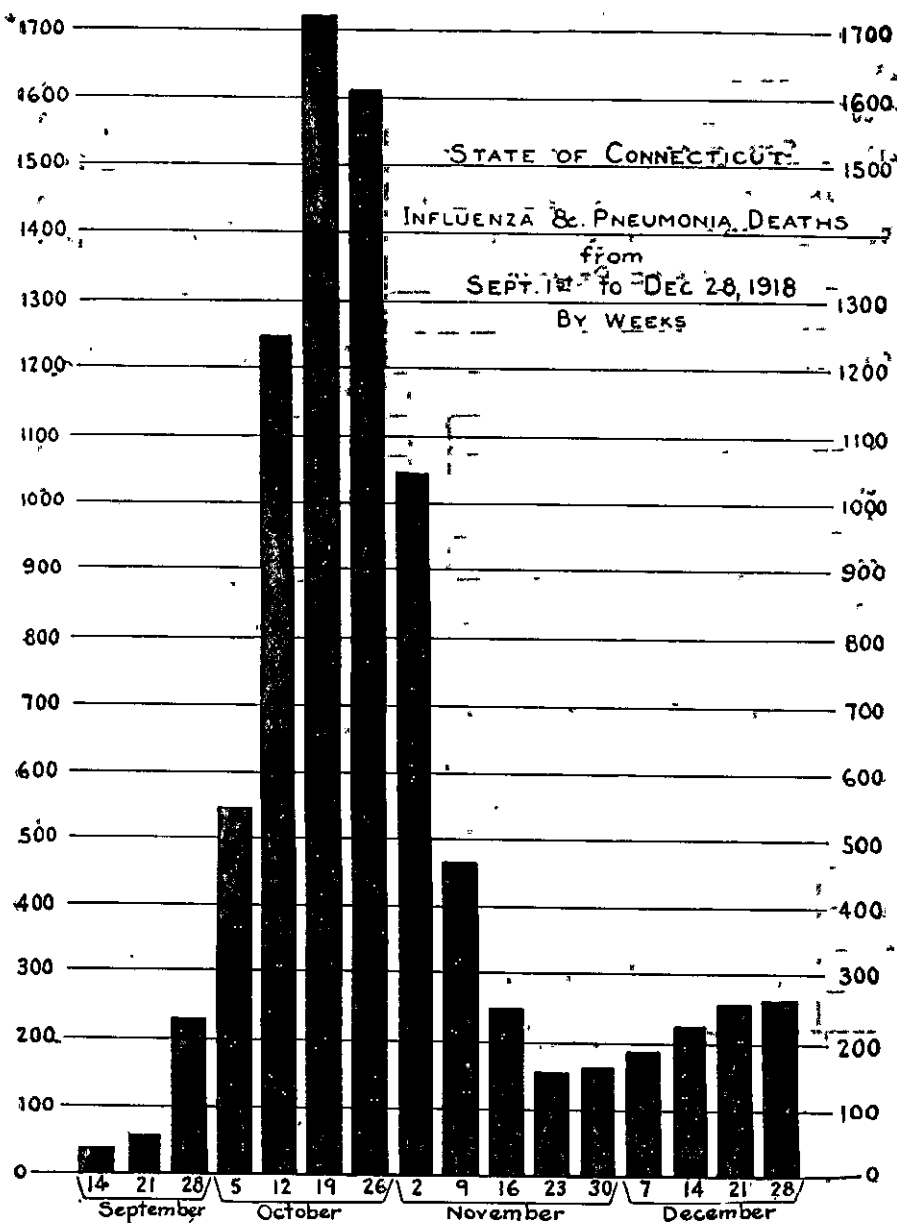


FIG. 2.—Influenza and Pneumonia Deaths, Sept. 1 to Dec. 28, 1918

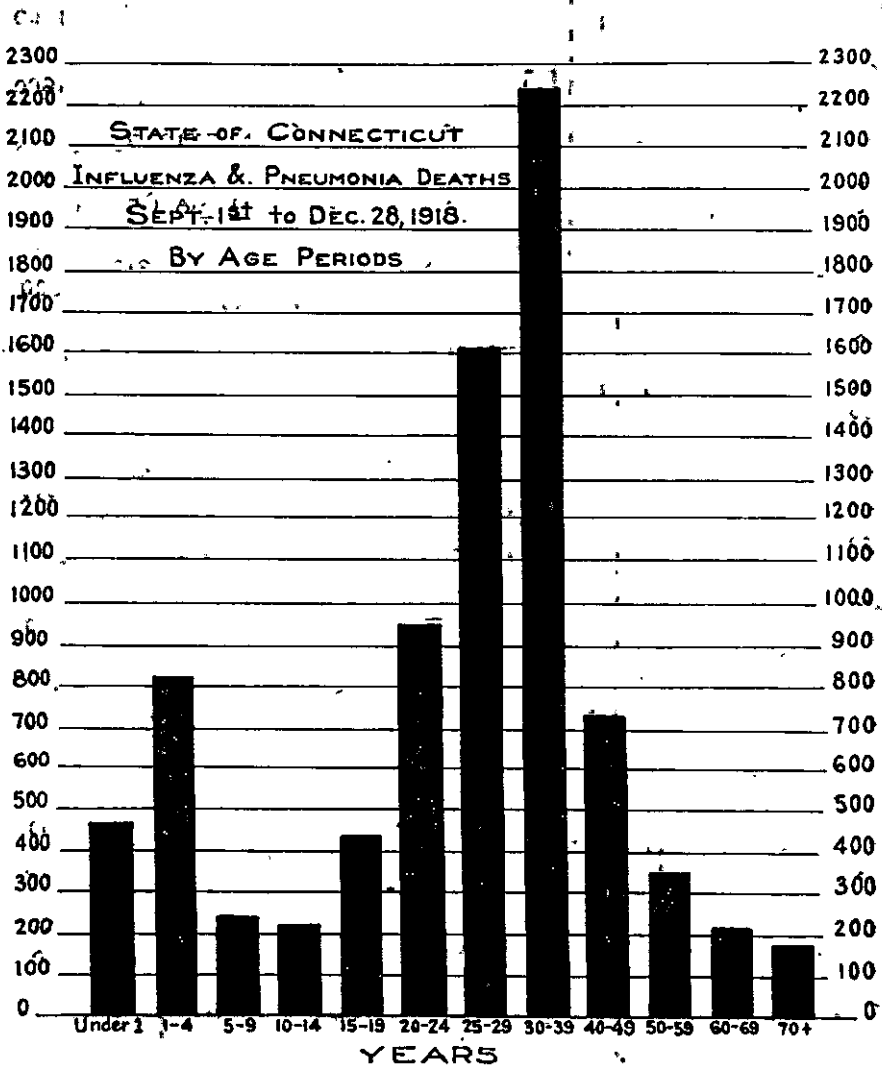


FIG. 3.—Influenza and Pneumonia Deaths by Age Periods

Deaths from Influenza and Pneumonia (All Forms)
Showing the Spread of the Epidemic 1918

Towns	September				October			November					December				
	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28
Ansonia	—	—	2	12	18	28	28	13	9	5	—	2	4	1	2	4	4
Berlin	—	—	—	—	—	2	4	4	4	—	1	1	—	1	—	—	1
Branford	—	—	—	—	—	1	5	4	9	9	4	—	—	—	—	—	1
Bridgeport	—	—	—	10	14	45	103	199	190	102	53	29	32	19	26	24	22
Bristol	—	—	—	—	3	30	30	25	10	2	1	—	—	3	2	3	1
Danbury	—	—	—	—	1	6	15	20	22	8	3	—	—	1	2	4	6
Darien	—	—	—	—	—	1	1	2	4	1	2	—	—	—	—	—	1
Derby	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
East Hartford	—	2	3	3	13	47	32	12	12	3	—	—	—	—	—	—	2
Enfield	—	—	—	—	—	7	6	7	4	3	—	1	1	2	1	—	—
Fairfield	—	—	—	—	—	5	13	11	13	6	1	—	—	1	1	5	1
Glastonbury	—	—	—	—	—	4	3	9	13	13	2	2	3	2	2	4	1
Greenwich	—	—	—	—	—	1	1	2	2	1	1	1	2	1	1	—	—
Groton	—	—	—	—	6	9	4	10	1	2	2	2	4	2	2	2	2
Hamden	—	—	—	—	—	1	6	8	7	5	3	1	—	—	—	—	1
Hartford	4	1	12	34	64	141	206	139	96	42	24	17	24	25	29	25	29
Killingly	—	—	—	—	—	4	11	3	2	1	—	—	—	—	—	—	—
Manchester	—	—	—	—	—	5	14	13	5	2	1	—	—	3	1	—	4
Meriden	—	—	—	—	—	2	89	72	33	19	7	4	4	2	3	2	5
Middletown	2	—	2	3	7	35	53	36	17	12	12	—	6	2	4	4	6
Milford	—	—	—	—	—	1	7	3	6	2	—	—	—	1	2	2	—
Naugatuck	—	—	—	—	—	1	19	27	11	1	2	—	—	1	1	1	5
New Britain	—	1	1	5	23	75	138	104	51	14	2	7	7	11	11	7	7
New Haven	1	—	1	16	38	83	164	194	164	75	40	19	26	36	30	49	36
New London	—	—	1	9	41	62	56	21	13	6	4	7	6	2	1	—	7
New Milford	—	—	—	—	—	1	2	6	5	—	—	1	—	—	—	—	—
Norwalk	—	—	—	—	—	1	5	18	4	2	—	—	—	—	—	—	—
Norwich	3	1	9	26	60	59	37	37	25	14	9	4	3	8	4	3	7
Orange	—	—	—	—	—	2	5	14	5	3	2	1	1	2	2	3	4
Plainfield	—	—	—	—	—	2	8	16	9	3	1	1	2	5	6	4	6
Plymouth	—	—	—	—	—	1	4	4	2	1	2	1	1	—	—	—	—
Putnam	—	—	—	—	—	2	5	13	5	1	—	—	—	2	—	—	3
Seymour	—	—	—	—	—	4	13	3	8	4	1	5	—	1	1	—	1
Shelton	—	—	—	—	—	1	8	23	9	1	1	1	1	1	1	—	—
Southington	—	—	—	—	—	6	9	10	1	1	1	1	1	1	—	—	1
Stafford	—	—	—	—	—	1	2	2	13	3	2	3	2	2	2	2	1
Stamford	—	—	—	—	—	1	2	13	13	3	2	1	—	—	—	—	1
Stonington	—	—	—	—	—	1	19	35	32	15	3	4	2	5	11	11	16
Stratford	—	—	—	—	—	2	11	12	2	—	—	—	—	1	1	2	1
Torrington	—	—	—	—	—	1	2	5	3	—	—	—	—	1	1	1	7
Vernon	—	—	—	—	—	1	1	4	5	6	3	4	1	2	3	1	—
Wallingford	—	—	—	—	—	1	6	13	17	15	8	3	5	7	9	13	6
Waterbury	—	—	—	—	—	3	18	22	7	1	1	—	—	1	1	3	—
Watertown	—	—	—	—	—	1	14	10	2	—	—	—	—	—	—	—	1
West Hartford	—	—	—	—	—	4	11	7	13	37	20	6	2	6	15	19	15
Westport	—	—	—	—	—	4	11	7	3	—	2	—	2	—	1	1	1
Winchester	—	—	—	—	—	2	7	1	7	1	1	—	—	1	3	4	1
Windham	—	—	—	—	—	5	7	4	1	—	—	—	—	2	6	1	—
Windsor	—	—	—	—	—	1	7	14	9	4	1	1	—	1	2	1	—
(Towns under 5,000)	—	1	3	13	34	57	24	12	1	1	—	—	—	—	1	3	2
Total for State	15	18	62	228	546	1,252	1,714	1,604	1,046	487	246	166	170	192	225	256	261

Ages of Influenza Cases and Deaths

The epidemic was particularly fatal to children under five years of age and the age-group of 25-39 years.

The following table of the deaths from influenza and pneumonia from September 1, 1918, to December 28, 1918, shows the age distribution of the deaths and also compares the deaths with the 1917 age distribution:

Deaths from All Causes for Period September 1 to December 28, 1918,
Compared with Same Period 1917

Age Groups	Total Deaths Sept. 1 to Dec. 28 All Causes		Excess Deaths in 1918	Deaths from Influenza and Pneumonia 1918	Percentage of each age group to total deaths	
	1917	1918			1917	1918
Under 1 year.....	1,091	1,505	414	474	18.2	10.7
1 to 4 years.....	409	1,111	702	816	6.8	7.9
5 to 9 years.....	136	366	230	245	2.3	2.6
10 to 14 years....	76	295	219	218	1.1	2.1
15 to 19 years....	108	571	463	433	1.8	4.1
20 to 24 years....	186	1,130	944	962	3.1	8.1
25 to 29 years....	202	1,831	1,629	1,602	3.4	13.0
30 to 39 years....	470	2,688	2,218	2,243	7.8	19.1
40 to 49 years....	571	1,275	704	732	9.5	9.1
50 to 59 years....	672	991	319	361	11.2	7.1
60 to 69 years....	840	924	84	215	13.9	6.6
70 years and over.	1,242	1,370	128	186	20.6	9.7

Complete statistics will appear in the Connecticut Vital Statistics Reports for 1918 and 1919.

Influenza Vaccine

Soon after the epidemic started, different vaccines appeared and were hoped to be useful as a prophylactic against influenza.

The vaccine used chiefly by the department was that made by Dr. Watters of Boston University Medical School and Dr. O'Leary of Tufts College Medical School. Over 4,000 doses of these vaccines were distributed for use by the department in institutions and among industrial plants where its effects could be studied and value determined.

From reports received, it was impossible to form any definite conclusion, but the vaccine apparently had little influence as a preventive or in diminishing the severity of the illness in individual cases.

Department Activities

With the appearance of influenza in epidemic form, and the making of the disease reportable, many activities were necessary in the handling of an influenza epidemic that are absent in other

epidemic diseases. The newly organized Department was suddenly called on to furnish doctors, nurses, assist in establishing emergency hospitals, and to use all possible means along educational lines to prevent the spread of the disease through ignorance of the laws of respiratory diseases.

Educational Measures and Publicity

Educational measures were immediately taken through the press, pamphlets and posters to warn the public of the character of influenza and particularly the precautions necessary to avoid infection.

Much of the publicity advocating preventive methods against influenza was carried on by placards and leaflets, and the latter were supplied to health officers and Red Cross chapters by the thousands.

The Commissioner of Health was assisted by the State Council of Defense, and as this organization was already carrying out educational work for war purposes, it was an excellent medium for distributing influenza information throughout the state. Many bulletins were sent out by the State Department of Health through the State Council of Defense.

These carried information as follows:

HALT INFLUENZA

PLAY SAFE. If you become ill, don't delay treatment. Influenza is rapid in its onset. It is usually preceded by a chill, a chilly sensation or dizziness. Sometimes a marked feeling of weakness is the first symptom.

The following suggestions for "Treatment of influenza without complications" are issued by the Connecticut State Council of Defense and contain the advice of medical authorities:

FIRST — Upon experiencing any influenza symptoms go to bed at once then **CALL A PHYSICIAN.** Take no chances.

THEN — While waiting for the physician, or, in case you are unable to secure one, take a saline cathartic (dose of Epsom or Rochelle salts) to be followed soon after by a drink of hot lemonade, in order to get the bowels and skin active. This is of paramount importance, as it helps to rid the system of many toxins. Should profuse perspiration occur, the body should be wiped with a soft towel. If the patient is restless, due to high fever, an ice-cap placed at the head and kept there for one or two hours at a time will reduce nervousness and make the patient more comfortable.

VENTILATION The room should be well ventilated by open windows which will tend to allay irritation of the nose and throat. Cold air is not harmful, but close air acts as a poison.

DIET — It is necessary to retain the body resistance by a regular diet. This consists of milk every two hours for the first day. If the patient is unable to take milk substitute broths or light gruels. In either case give a **PLENTIFUL SUPPLY OF WATER.** After the first or second day cocoa and broths may be added. As the fever subsides, lightly cooked eggs, toast and cereals are permissible.

DON'T GET UP TOO QUICKLY

Usually on the fourth or fifth day the patient's temperature subsides to practically normal, but it is at this time that the utmost care is needed to prevent the pneumonia complication, and the surest way to do this is to **REMAIN IN BED AT LEAST FORTY-EIGHT HOURS AFTER THE FEVER HAS SUBSIDED.**

Those caring for persons afflicted with influenza should provide themselves with masks. Directions for making such masks follow:

For material use as fine gauze or cheesecloth as possible. Fold the material to make five thicknesses, and cut an oblong $5\frac{1}{2}$ by $7\frac{1}{2}$ inches. Make three half-inch pleats at each end, turn in edges and stitch. Cut four feet of tape into four lengths and sew one to each corner. Make box pleat $1\frac{1}{2}$ inches in width on one of the long edges of the mask; stitch down one inch.

To adjust, place the mask over the face, tie the tapes from upper corners around the back of the head and the tape from the lower corners around the back of the neck. Place box pleat over the nose.

These masks should be changed at two hour intervals and oftener if wet. They should then be immediately boiled for five minutes, or burned, or wrapped securely in a paper bag or newspaper until they can be boiled.

Distributed by the Connecticut State Council of Defense through its local Agency, at Request of State Department of Health.

HELP FIGHT THE GRIPPE

KAISER WILHELM'S ALLY

How Not to GET It	How Not to GIVE It
<p>GET FRESH AIR AND SUNSHINE. AVOID CROWDED PLACES, ESPECIALLY CARS. KEEP AWAY FROM SNEEZERS AND COUGHERS. DON'T VISIT PEOPLE ILL WITH COLDS. KEEP YOUR MOUTH AND TEETH CLEAN. PROTECT THE BODY BY PROPER CLOTHING. AVOID EXPOSURE TO SUDDEN CHANGES. AVOID WORRY, FEAR AND FATIGUE.</p>	<p>STAY AT HOME ON THE FIRST INDICATION OF A COLD. DON'T RECEIVE VISITORS WHILE SICK OR RECOVERING. DON'T LEAVE YOUR HOME UNTIL ALL SYMPTOMS HAVE GONE. DON'T SNEEZE, SPIT OR COUGH IN PUBLIC PLACES. DON'T HESITATE TO COMPLAIN AGAINST CARELESS COUGHERS AND SPITTERS.</p>

THE STATE DEPARTMENT OF HEALTH AND THE CONNECTICUT STATE COUNCIL OF DEFENSE URGE YOU TO

DO YOUR BIT TO STOP THE GRIPPE

ISSUED BY CONNECTICUT STATE COUNCIL OF DEFENSE

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State Department of Health

OFFICIAL INSTRUCTIONS

INFLUENZA

Care of Self and Others

Masks

1. To be worn while attending patients.
2. Adjust properly before entering sick room.
3. **KEEP HANDS OFF** when once adjusted.
4. Change every two hours, or oftener if it becomes moist.
5. Drop used masks in a receptacle kept for that purpose.
6. Never wear a mask that has been used unless it has been sterilized.
7. Sterilize by boiling or destroy by burning. (See direction for making mask.)

Hands

1. Wash hands with soap and hot water after contact with each patient.
2. Always scrub hands before eating.

Teeth

1. Brush teeth frequently.

Care of Patient

General

The earlier a patient is placed in bed and kept there, the bowels opened by salts, or enema, or both, followed by a diaphoretic (hot lemonade is an efficient diaphoretic), the chances of early and complete recovery are greatly enhanced.

Follow general nursing care of patient as directed by the physician, which will probably include:

1. Keeping patient as quiet as possible.
2. Giving nourishment at regular intervals—preferably milk for first two days, then broths, cocoa, cooked cereals or gruel; later, eggs, etc.
3. Giving quantities of water to drink.
4. Using paper handkerchiefs for collecting discharges from nose and throat. (Have a paper bag convenient for patient to dispose of used handkerchiefs. Collect frequently and burn.)

Screens

When there is more than one patient in a room, place a screen between beds to prevent cross infection between patients.

Dishes

Patient's dishes to be thoroughly boiled after each use.

Unused Food

Food returned from the sick room to be destroyed.

Bedding

Change bedding as soon as soiled by excretions.

Drafts

Avoid exposing patient to drafts. Protect by screens and proper clothing.

Convalescence

Keep patient in bed at least 48 hours after temperature has reached normal.

Patients' Room

Sunlight

When possible, obtain room exposed to sunlight. Keep it well ventilated all the time.

Do not dry sweep room but sprinkle moistened sawdust or other suitable material upon the floor before gathering up dust.

Keep a basin of antiseptic solution in the room for care of hands.

Isolation

Visitors

Exclude all unnecessary visitors for their own safety and the comfort of the patient.

Visitors must wear a clean mask and be instructed in its use.

Discourage handshaking by patient and visitor.

Do not allow kissing of patient.

See that visits are short.

Insist that visitors wash their hands thoroughly before leaving the sick room.

Directions for making Masks

For material use as fine gauze or cheese cloth as possible. Fold the material to make five thicknesses, and cut an oblong $5\frac{1}{2} \times 7\frac{1}{2}$ in.

Make three half-inch pleats at each end, turn in edges and stitch.

Cut four feet of tape into four lengths and sew one to each corner.

Make box pleat $1\frac{1}{2}$ in. in width on one of the long edges of the mask; stitch down one inch.

To adjust, place the mask over the face, tie the tapes from upper corners around the back of the head and the tapes from the lower corners around the back of the neck. Place box pleat over the nose.

These masks should be changed at two hour intervals and oftener if wet. They should then be immediately boiled for five minutes, or burned, or wrapped securely in a paper bag or newspaper until they can be boiled.

TO PREVENT INFLUENZA

1. Don't Inhale any Persons' Breath.
2. Avoid Persons who Cough and Sneezé.
3. Don't Visit Close, Poorly Ventilated Places.
4. Keep Warm and Dry.
5. If You Get Wet, Change Your Clothes at once.
6. Don't Use Drinking Cups or Towels that Other People have Used.
7. For the Protection of Others, Cover your Mouth when you Cough or Sneeze.
8. Clean your Teeth and Mouth Frequently.
9. Don't Spit on the Floor.

Issued by the State Department of Health
and Connecticut State Council of Defense.

BE TALK TO OTHERS

WARNING!

Influenza is Subsiding BUT DANGER STILL LURKS

Advice To Those Who Have Escaped The Disease

- Avoid those who Cough and Sneeze
- Don't visit close, poorly ventilated places
- Don't use common drinking cups or towels
- Keep your hands and teeth clean by frequent brushing

Advice To Convalescents

- Avoid close contact with other people until all signs of cough have disappeared
- Carefully dispose of secretions from nose and mouth
- Avoid over-exertion
- Continue treatment until perfectly well to avoid

Chronic { lung trouble
ear " "
nervous " "

Do Not Spit in Public Places—It spreads Disease

BE FAIR TO OTHERS

Much of the educational matter and information was supplied to the press through the State Council of Defense.

Health officers throughout the state were notified of the appearance of the epidemic type of influenza early in September and many press notices were given to the papers of the state as often as was felt necessary during the course of the scourge. One of the early notices read as follows:

State Capitol, Hartford, Sept. 26—Because Spanish influenza is at present epidemic, extraordinary precautions should be taken not only to avoid contracting the disease but to prevent the possible development of pneumonia, said Dr. John T. Black, State Commissioner of Health, in a statement issued to-day for the guidance of the public during the epidemic.

"Spanish influenza is an infectious disease which should at all times be seriously considered because of the frequent development of pneumonia as a consequence," Dr. Black said. "Widespread epidemics occasionally occur, as at present, with more or less disastrous results. When influenza once gets a foothold in a community it is practically impossible to check it by the usual methods of controlling communicable diseases. Many, however, can often avoid serious consequences by observing a few simple precautions."

"Most cases of pneumonia occur in the cases of persons who try to fight off symptoms of influenza without going to bed, or who leave their beds before recovery is complete."

Here are Dr. Black's precautionary instructions:

How to Avoid Influenza

1. Keep your mind and body in as near a normal state as possible.
2. Avoid overwork and excesses.
3. Don't allow anyone to breathe, cough or sneeze in your face.
4. Keep away from public gatherings.
5. Keep your teeth clean by brushing and by the use of an antiseptic gargle night and morning.

How Not to Give Influenza

1. Upon the first indications of cold or fever retire immediately to your home and send for the doctor.
2. If the doctor confines you to your room or sends you to bed, stay there until he tells you to go out or get up.
3. Bar all other visitors until well on the road to recovery.

September 30, 1918.

OFFICIAL STATEMENT ON INFLUENZA

The following statement concerning the prevailing epidemic was issued by Dr. J. T. Black, Commissioner of the State Department of Health. It was urged that it be given wide publicity throughout the state:

The prevailing disease, influenza, is one which should be seriously considered because it is frequently followed by pneumonia. Fear and dread of this disease should not pervade the minds of the people, but rather a common-sense resolution to endeavor to avoid it, and if not successful, to follow good advice.

While laboratories have not determined the exact cause of the prevailing disease, it so simulates the well-known influenza or la grippe that for all practical purposes it should be treated as such.

Symptoms

The disease is characterized by a sudden onset, often requiring the afflicted person to drop his, or her work. The first symptoms are those of chilliness, or chill, accompanied by a tickling or scratchy throat and cough sometimes with coryza and sneezing. The chill is followed by headache, backache, high fever and great prostration. Fever range continues high from three to four days when, in the mild type of the disease, it subsides gradually, and recovery is uneventful aside from general weakness. In children nosebleed and vomiting are frequent.

A persistent cough accompanies the disease in practically all cases. The complication of pneumonia may occur about the fifth or sixth day. About ten per cent. of all cases have so far developed pneumonia, with about ten per cent. of those proving fatal. Pneumonia develops rapidly involving a large area, and when cases are fatal death usually occurs within forty-eight hours. Recovery of the non-fatal cases of pneumonia is almost as rapid as the onset. One per cent. of all cases of influenza are fatal, with pneumonia as practically the only complication.

Control

When influenza once gets a foothold in a community, it is impossible to check it by the usual methods used to control communicable diseases. Many people, however, can avoid contracting the disease by observing the recommendations of health authorities, and many who do contract it can often avoid serious consequences by carefully observing the instructions of physicians.

How to Avoid Influenza

1. Endeavor to keep in as healthy a condition as possible. Avoid overwork and other excesses.
2. Do not allow anyone to breathe, cough or sneeze into your face, and keep away as much as possible from public gatherings.
3. Keep teeth, mouth and throat clean.

How Not to Give Influenza

1. Upon the first indication of cold or fever, one should immediately repair to his or her home, there to remain until the cause of the discomfort is known.
2. Persons ill with definite symptoms of influenza should confine themselves to their rooms and bar all visitors until well on the road to recovery.

How to Avoid Pneumonia

1. Do not try to stick it out. If you think you have the disease, go to bed at once.

2. Do not get up or return to work until permitted to do so by your physician, as most cases of pneumonia have occurred in those who have failed to observe these precautions.

The epidemic is rapidly spreading throughout the state, cases being numbered by hundreds in many cities. New London and Norwich, the cities first affected, now have three to four thousand cases each. Many more will undoubtedly develop within the next week or ten days throughout the state, and it behooves every individual to take utmost precautions to avoid the infection. Any person suffering with this disease who unnecessarily exposes others at this time, is guilty of a most unpatriotic act.

It is not believed that the closing of schools will materially check the progress of the disease, but unquestionably the teachers in the state can do much toward lessening the number of cases by observing each child as it enters school and sending home those who show any signs of cold, cough or illness. If it were possible to keep school children at home, there might be some advantage in closing the schools, but experience has shown that when schools are closed, the children visit each other's homes to such an extent that the object in closing the schools is rendered practically nil.

Widest publicity should be given by health officers to the fact that the attendance at public gatherings renders one most liable to contract this disease. More or less anxiety is felt over the possibility of a shortage of doctors and nurses for the next two weeks, and it is urged that every effort be made to conserve the strength of these professions. Unnecessary calls or operations which could be postponed, should be allowed to wait. Many physicians who have been fighting the epidemic have, because of overwork and exhaustion, contracted the disease; and a number of cases have proven fatal. Cool judgment, common sense and obedience to instructions will greatly lessen the evil effects of this or any epidemic.

State Capitol, Hartford, October 10—All pastors in the state were to-day urgently called upon by the State Department of Health to cooperate in the campaign to check the epidemic of Spanish influenza. Pastors were asked to explain the nature of the disease to their congregations and to impress upon the latter that there must be no sneezing or coughing during church services.

"Pastors can do much toward preventing the spread of the epidemic if they will explain to their congregations that the infection is spread from the sick to the well by means of the discharge from the nose and throat conveyed by coughing and sneezing," said Dr. John T. Black, State Commissioner of Health. "Pastors should also request that any member of the congregation who is liable to sneeze or cough during the service ought to retire in the interest of the health of those sitting nearby."

Physicians and nurses, while attending cases of influenza, were urged by the State Department of Health to wear masks. These, it was said, should be adjusted to the face before entering a sick room and not removed or otherwise touched by the hands until the attendant leaves the room. Then the hands should be thoroughly washed in an antiseptic solution and the mask sterilized. Hospital assistants, according to the Health Department, should change their masks at two-hour intervals unless the masks are wet, when they should be changed at shorter intervals. The masks should then be sterilized.

Disinfection of masks, it was explained, may be accomplished by boiling them for five minutes. Until they can be boiled, they should be wrapped securely in paper.

The Health Department pointed out that observance of these rules would lessen the danger of infection to attendants.

State Capitol, Hartford, October 11—Directions for the making of gauze face masks, which should be worn by all persons attending cases of influenza or pneumonia, were announced to-day by the State Department of Health. The directions follow:

For material, use as fine gauze or cheese-cloth as possible. Fold the material to make five thicknesses, and cut an oblong $5\frac{1}{2}$ by $7\frac{1}{2}$ inches. Make three half-inch pleats at each end, turn in edges and stitch. Cut four feet of tape into four lengths and sew one to each corner. Make box pleat $1\frac{1}{2}$ inches in width on one of the long edges of the mask; stitch down one inch.

To adjust, place the mask over the face, tie the tapes from upper corner around the back of the head and the tape from the lower corners around the back of the neck. Place box pleat over the nose.

These masks should be changed at two-hour intervals and oftener if wet. They should then be immediately boiled for five minutes, or burned, or wrapped securely in a paper bag or newspaper until they can be boiled.

For the Protection of Those Attending Cases of Influenza

The State Department of Health urges physicians and nurses to wear masks while in attendance upon cases of influenza. Masks should be adjusted to the face before entering a sick room and not touched by the hands nor removed until the attendant leaves the room, after which the hands should be thoroughly washed in an antiseptic solution and the mask sterilized in a manner stated below. In the case of hospital attendants masks should be changed at two-hour intervals and oftener, if wet, and immediately boiled. To disinfect masks they should be immediately boiled for five minutes, or burned, or wrapped securely in paper until they can be boiled.

Close observance of these suggestions may prevent attendants becoming infected.

Closing of Public Places

The policy of keeping open public places, as schools and theaters, was advocated and in the large cities of Bridgeport, Hartford and New Haven, where this plan was followed, the course of the epidemic was apparently more extended and less explosive in character than elsewhere in the state. The extension of the epidemic in this way assisted in allowing more medical care to be given to the patients by physicians, which in itself undoubtedly had a tendency to prevent fatalities and produce a lower death rate. The policy of the department was clearly stated in the letter sent to all local health officers on October 3d:

STATE OF CONNECTICUT

Department of Health

HARTFORD, OCTOBER 3, 1918

Local health authorities are asking for advice regarding closing of schools during the present epidemic of influenza. Our instructions are that the policy of this department is that schools should not be closed as experience in nearly all epidemics has shown that pupils are safer in a well-ventilated school and under the observation of teachers than when schools are closed and the children allowed to intermingle in homes and upon the streets. We advise that teachers be instructed to observe each pupil closely for the first sign of a cold, and should any occur, that the child be sent home immediately and the name and address of the pupil submitted to the health officer by the school authorities.

The question as to the admission to school of any contacts (brothers and sisters) of a case should be largely governed according to the known social conditions of the home; but in general, contacts of a child showing signs of cold should be allowed to attend school as contacts are safer in school than they are when kept at home in close association with the patient; and because it is a very large question whether the disease is conveyed by the well.

We especially urge that school teachers exercise very good judgment in trying to allay undue fear on the part of pupils and the pupils' parents. Perhaps short talks might be given by the teachers to their charges, stating that "anyone with symptoms of a cold should go to bed immediately and not wait until to-morrow. Take a laxative. Drink much plain water. Have plenty of fresh air in the room. Send for a doctor and stay in bed at least forty-eight hours after all symptoms have subsided."

How to Avoid Infection

Influenza is highly communicable from the sick to the well. To avoid infection keep out of places where sick people are. Do not let anyone cough or sneeze into your face. If they should, protect your mouth and nose immediately. Wash hands frequently. Keep mouth and teeth clean. Avoid getting tired—go to bed early. Eat your meals regularly and slowly. Keep away from any place where the disease is.

If these precautions are observed, the chance of being infected is not great.

By direction of the Commissioner of Health.

Very truly yours,

T. E. REEKS,

Director

Bureau of Preventable Diseases.

October 5, 1918

TO HEALTH OFFICERS:

Through the State Council of Defense, the State Department of Health is sending notices to theatre owners and managers stating that the policy of this Department is not to recommend the closing of theatres because of the epidemic of Influenza UNLESS LOCAL CONDITIONS WARRANT IT, provided the owners or managers pay special attention to ventilation, and that they throw on the screen at least three times during each performance, slides to read as follows:

1st. "The Health Authorities will close this theatre unless spitting, coughing or sneezing is omitted during performances."

To be followed immediately by—

2d. "Sneezing and coughing in this theatre may spread Influenza. Be fair, and stay home if you have a cold."

To be followed by—

3d. "If you have a cold retire now. Do not endanger the health of others, and save yourself embarrassment."

If, notwithstanding these slides, sneezing or coughing occurs, the performance is stopped and the following slide is to be used:

"The person sneezing or coughing will please retire now in the interest of the health of those sitting near him!"

Of course propaganda already instituted in theatres by local health authorities will take precedence, if they so desire.

The Council of Defense is now having posters relative to Influenza printed for display in every town.

Through the newspapers we are suggesting that it would be a fine thing were the clergy to request members of their congregations with colds to remain at home, etc.

Report each day only number of new cases of Influenza; names not required. Would suggest that you require same of physicians.

By direction of the Commissioner of Health.

T. E. REEKS,

Director

Bureau of Preventable Diseases.

State Capitol, Hartford, October 5—In its current campaign to check the epidemic of Spanish influenza, the state department of health does not advocate the closing of either schools or theaters. Instead, it is asking teachers to observe the school children and to send home and report, all those showing influenza symptoms. Theater managers are being informed that they must carry out certain orders of the health department. If they do so, theaters will not be closed. In manufacturing centers containing large numbers of tenement houses, representatives of local health departments are being sent to the factories to give one-minute talks on influenza prevention to the employees.

The instructions of the state department of health to the school authorities direct the latter to ask teachers to send home any child exhibiting any symptoms of a cold, and to send the child's name and address to either the school inspector or the health officer. The brothers and sisters of such a child will be kept in school, Dr. John T. Black, secretary of the state department of health, saying that in all epidemics affecting schools, fewer children are infected when the schools are kept open than when they are closed.

"When schools are closed, children are apt to play together at all hours of the day whereas when they are in school there is a certain amount of isolation, and when the ventilation of school rooms is properly supervised, pupils are far better off there than at home," said Dr. Black.

The state department of health believes that the entertainment provided by theaters has a good psychological effect upon the human system, and tends to raise the resisting powers of the body against infection. In order to be allowed to keep the theaters open during the epidemic, managers must agree to show upon the movie screen four slides. These slides will explain a few simple anti-influenza rules.

Physicians and Nurses

Physicians and nurses were absent on war duty, leaving a greatly reduced number at home, who were barely able to successfully cope with the usual diseases. The influenza epidemic added to their burdens, and it was necessary to call in physicians and nurses from outside the state to cover those portions of the state not provided with medical and nursing service.

The progress of the epidemic was so rapid and the need of additional medical and nursing service so apparent that a call for nurses was sent out by the Department on October 5th, 8th, and 17th.

NURSES

Graduate and Non-graduate

You are needed in Connecticut to help overcome the influenza epidemic. Don't leave your home state folks to die while you seek a Pot of Gold at the end of a rainbow somewhere else.

State Department of Health will place you where you can serve best.

Guarantees your pay. Graduate nurses, \$28 per week and expenses; trained nurses' assistants, \$15 per week and upward and expenses.

Report at once by telegraph or telephone to State Department of Health, Hartford, Conn., for assignment.

Call Sent Out Through State Council of Defense

October 5, 1918

State Capitol, Hartford, October 5—All doctors and nurses who are in a position to render their services wherever in the state they may be most needed during the influenza epidemic were urged to-day by Dr. John T. Black, secretary of the state department of health, to send their names to that department. Doctors and nurses called upon will be given compensation and all expenses.

Dr. Black said there was a great need in Connecticut of doctors and nurses.

"As the epidemic reaches its height and sweeps over the state from east to west, pneumonia and deaths increase in number, and in certain communities the shortage of physicians and nurses is greatly felt," Dr. Black declared. "The department of health earnestly urges upon all physicians and nurses not to leave the state, but to remain where they are in readiness for a call. No doctor or nurse should neglect the opportunity to render his or her very real bit by thinking that there is someone else to bear the burden. Personal risk incidental to attending cases of influenza can be avoided by wearing a mask."

Call Sent Out Through State Council of Defense

October 8, 1918

OFFICIAL CALL

The need of services of nurses' aides to care for those stricken by Influenza is urgent, and, in many cases, desperate. Whole families are ill with no doctor or nurse in attendance, and in many cases patients are suffering for want of water and food as they are too sick to get it themselves.

The duties of nurses' aides consist in rendering most practical service to individual patients as directed by the local authority.

Your name is on file as a volunteer, and you are hereby requested to send your name and address to the State Department of Health, stating the earliest time you will be able to report for duty.

Signed:

As the need for nurses increased, exceeding greatly the number available, an additional call for women willing to nurse cases was sent forth.

State Capitol, Hartford, October 16—Women of Connecticut, even though they are not trained nurses, were to-day urged by the State Department of Health to volunteer their services for the duration of the Spanish influenza epidemic.

It was pointed out that because so many doctors and nurses have entered the national service, the state is short of both, and that since whole families are stricken with the epidemic, there would be need of women volunteers even if the normal number of doctors and nurses were available. Women, it was said, should volunteer their services through some central organization in their respective towns. Each woman should take charge of at least two families. They should see that the housework is kept up and meals prepared.

Without such help from the women of the state, Health Department officials said that the mental and physical suffering in many families would be beyond comprehension. One doctor declared that in one family he visited the father was found to have been suffering from influenza and to be extremely weak. Two children were suffering from whooping cough, complicated by grippe, the mother was in bed, prostrated by influenza, and at her side another child was dying. The doctor arrived late in the afternoon, and found that for forty-eight hours the entire family had been without medical attention, and that none of them had had anything to eat or drink since the previous day because they were too weak to leave their beds and prepare food. Before the mother was prostrated, she had cared for her sick husband and children despite her own illness.

"Consequently, the condition of her household when she was finally prostrated can better be imagined than described," said the doctor. The latter was asked what he did to relieve the situation.

"I did the only thing there was to do," he replied. "I rolled up my sleeves, lighted a fire, washed some dishes, cooked some cereal and gave the patients something to eat and drink. I then tried in other ways to relieve their physical condition, but it was too late to do much good. The baby died a few minutes after my arrival. The mother's condition is critical, and there is little hope for her recovery. The father's condition is worse, because of his grief. When I arrived, there was no outcry on the part of father or mother. Their attitude was one of resigned mental and physical suffering."

When this doctor made his next call he found a family of three—husband, wife and child. The mother was prostrated. Lying in bed beside her was her crying child, and in another room was the father, so delirious that the doctor had to lock him in while giving treatment to the mother and child. When the doctor returned to the father, the latter was dying.

"Such situations explain why women volunteers are needed," said the doctor.

Call Sent Out Through State Council of Defense

October 17, 1918

State Capitol, Hartford, October 17—At the request of the State Commissioner of Health, the woman's committee of the Connecticut State Council of Defense instituted a campaign to secure nurses needed in the fight against influenza, but found that only in a few cases could women be spared for work other than in their own community.

Using the census of nurses compiled in 1917, the woman's committee listed all trained and experienced nurses living in twenty-two of the larger

towns of the state, making a separate list for each town. These lists were sent to the chairman of the woman's committee of the towns concerned. The latter were Hartford, New Haven, Waterbury, Bridgeport, Norwalk, Norwich, Putnam, Stamford, Torrington, Ansonia, Berlin, Bristol, Danbury, Darien, Derby, Greenwich, Meriden, Middletown, Naugatuck, New Britain and New London.

With each list went a letter requesting each woman's committee chairman to organize an emergency committee. The latter was to check up the nurses listed to find out what each nurse was doing, and if not working, to urge her into service. Any nurse available for out-of-town service was to be asked to report to the State Health Commissioner, so that she might be placed by him in one of the emergency hospitals or in some other place particularly needing her service.

In spite of these appeals which were sent to several states, it was extremely difficult to get sufficient nurses to handle even the more serious cases.

However, during the epidemic 101 nurses and 48 physicians were secured from outside agencies as the Red Cross and the U. S. Public Health Service.

Of the 48 physicians, 21 were supplied by the U. S. Public Health Service between October 6th and 18th, and on the 26th of October, because of the spread of the epidemic westward, the Federal authorities requested that these physicians be released for emergency work elsewhere as soon as Connecticut did not need them. The physicians were distributed over the state in those towns and cities where they were needed the most, either taking the place of physicians who had gone to the war or assisting the few remaining behind who were overwhelmed with calls.

Physicians were assigned as follows:

Avon	3	Norwalk	1
Branford	1	Plainville	1
Bridgeport	6	Rockville	4
Bristol	3	Tariffville	1
Collinsville	2	Terryville	2
Derby	2	Thomaston	1
Georgetown	1	Wallingford	1
Meriden	2	Waterbury	13
Middletown	2	Waterbury	1
New Britain	6	Westport	1
New Hartford	3	Willimantic	3
New Haven	2	Winsted	1
New London	1	Statewide	5

The nurses were assigned at once on reporting and as conditions lessened in severity in a town, they were transferred to a new section where their services were more needed.

State Department of Health nurses were assigned to towns and cities as follows:

Town or City	Nurses	Town or City	Nurses
Ansonia	1	Norwich	1
Avon	2	Plainfield	1
Branford	1	Plainville	1
Bridgeport	10	Putnam	5
Bristol	4	Rockville	5
Canton (Collinsville)	4	Seymour	3
Derby	1	Simsbury	6
Fairfield	3	Southington	2
Hartford	2	Thomaston	1
Litchfield	4	Torrington	1
Manchester	3	Wallingford	2
Meriden	5	Waterbury	5
Naugatuck	1	Watertown	2
New Britain	7	Westport	3
New Haven	15	Willimantic	1
New London	5	Windsor Locks	4
Norwalk	7		

The nurses were obtained from the following sources:

Private Agencies

Talcott Drug Company	1
W. W. Hunt Company	1
Volunteered	33
By private doctors	9
American Red Cross	
New England Division	15
Atlantic Division	15

Municipal and Federal Agencies

U. S. Public Health Service	3
U. S. Public Health Service (Ayer Section)	1
New Britain Department of Health	1
Municipal Hospital, Hartford	2
New Haven Department of Health	2
Other Sources	17

101

Of the 101 nurses, 69 were furnished to hospitals and 28 were in the field. Twenty-three nurses left Connecticut to go to Boston for influenza work on call of the Red Cross there.

The nurses worked 1,981 days and the physicians 1,238 days on state work. Complete records of physicians and nurses who were taken sick in the performance of their duty are not available, but the records show that one physician and seven nurses were infected with influenza while on epidemic duty.

In recognition of the efforts and sacrifices made by certain individual workers in the influenza epidemic, Governor Marcus H. Holcomb acknowledged the services of 36 doctors and 52 nurses by the following letter:

"December 5, 1918

"It has come to my knowledge that you have done splendid work in assisting the State of Connecticut in combating the ravages of the influenza epidemic. I desire to express to you, on behalf of the State of Connecticut, my sincerest appreciation for your prompt response and efficient service in our time of need.

Yours very truly,

(Signed) MARCUS H. HOLCOMB,

Governor."

Emergency Hospitals

Certain sections of the state were particularly hard hit and so swift was the spread of the disease that emergency hospitals were necessary to care for the cases.

Hospitals of this nature were established by the different communities in the following places, the State Department of Health keeping in touch with the progress of the epidemic and in this way being able to supply nurses and physicians to some of these hospitals:

Ansonia	Norwalk
Avon	Norwich
Beacon Falls	Rockville
Branford	Seymour
Bridgeport.	Simsbury
Bristol	South Manchester
Canton	Stonington
Derby	Thomaston
Fairfield	Torrington
Groton	Wallingford
Hartford	Waterbury
Meriden	Westport
Naugatuck	Willimantic
New Britain	Windsor Locks
New Haven	Winsted
New London	

The buildings used for emergency hospitals varied:

Examples of Buildings Used

Barracks Building	Theatre
Private House	Armory
High School	Parish House
Country Club	Dance Hall
Lodging House	Fire House
Church	Club House

Emergency Ambulance Corps

The State Council of Defense furnished a volunteer automobile

corps for all physicians and nurses of the State Department of Health during the epidemic with centers in Bridgeport, New Haven and Hartford.

State Capitol, Hartford, October 11.—The Transportation Department of the Connecticut State Council of Defense, in cooperation with the Motor Messenger Corps, has arranged volunteer automobile transportation for doctors and visiting nurses of the State Department of Health during the epidemic of Spanish Influenza. Fourteen automobiles with drivers, have been secured for service between Hartford and towns in that section of the state. The Bridgeport and New Britain Boards of Health have been furnished with one car daily for a similar purpose.

The doctors sent from Hartford and Bridgeport act as inspectors. They investigate local epidemic conditions and report advisory emergency measures to Dr. John T. Black, State Health Commissioner.

Reports from the transportation department of the State Council are that automobile owners are anxious to aid the State Department of Health in the emergency and that in all cases responses to the requests for cars were immediate. In securing the cars the transportation department used the automobile census made last year.

Studies on Epidemic

Numerous surveys were made and outbreaks combated in various places, but complete records of all the work done were not made because of the necessity for carrying out the actual medical, nursing and field work, rather than require too much clerical work of professional workers, already overloaded physically.

It is unfortunate that this happened for it is always on facts written at the time events occur that new work should be based on like work and thus lay the foundation for efficient work in the future. Records and statistics are essential for accurate and efficient health work as in any other business.

Several localized epidemics were studied and surveys were made in Waterbury and New London of the prevalence of influenza cases.

Individual Outbreaks Studied

A study was made of the influenza outbreak in the St. Francis Orphan Asylum, in New Haven, where there were four hundred and sixty-four persons.

Because of influenza, no visitors had been allowed within the institution from October 1, 1918, up to the time the study was made on January 7, 1919, with the single exception of the School Supervisor, whose last visit was December 13th. Persons bringing Christmas gifts were not allowed to enter the building. The gifts were chiefly dolls, fruit, candy and other playthings.

No influenza cases were known to have existed prior to December 10th. One of the personnel was supposed to have had a slight attack of the disease about December 10th and on the 27th this

person became severely ill. Two others of the personnel apparently had cases about December 15th.

On Christmas Eve, December 24th, an entertainment was held for the children, but no outsider was allowed to be present. On the 26th, one child became ill and during the 27th there appeared one hundred and twenty-seven cases of influenza in the institution. Additional cases were reported daily thereafter until by January 7, 1919, there had been four hundred and twenty-four cases with seven deaths. Of this number three hundred and ninety-eight were children and twenty-six cases among the personnel.

Practically five per cent. of the cases in the children's group developed pneumonia, whereas among the adults thirty-five per cent. were followed by pneumonia.

The explosive character of the epidemic suggested the possibility of food as a cause and inquiry showed that one of the early cases among the personnel who was ill on December 15th had charge of the milk inspection at the institution, and it is possible that milk was the factor in the rapid spread of the infection. However, as others were ill with influenza at the same time, it is extremely doubtful that the epidemic could have been avoided, although the onset would not have been so widespread in character.

Another institutional outbreak that was studied was that of the Middletown State Insane Asylum where there was a resident population of 2,950, 312 of whom had influenza, or ten per cent. of the persons at the institution. The population was as follows:

Inmates	Male	1,237
	Female	1,333
Employees	Male	212
	Female	168
		2,950

The first case was diagnosed at the institution on October 3, 1918, and the following day four cases were found. The outbreak spread rapidly as will be seen by the following table:

Date	Cases	Deaths
October 3	1	0
October 4	4	0
October 5-11	25	0
October 12-18	99	0
October 19-25	53	3
October 26-November 1	41	4
November 2-8	12	3
November 9-15	33	11
November 16-22	12	2
November 23-30	6	0
December 1-30	26	2
Total	312	25

A survey of influenza cases was carried out in New Britain from December 3d to 6th, inclusive, in 1918; during which period 145 houses were visited in which 2,757 persons were living. Of this total 645 persons, or 24 per cent. had already been ill with influenza and 25 were fatal cases.

Group Summary

	Male	Female	Total
Dwellings	0	0	145
Number of persons	1,552	1,202	2,757
Cases	322	323	645
Fatal Cases	18	7	25

The survey covered the most congested portion of the city and included many different nationalities. The local board of health attempted to keep the schools, theaters, and public buildings open but was overruled by public opinion.

The New Britain General Hospital was converted into an emergency hospital and only surgical, influenza and pneumonia cases were admitted during the height of the disease.

Summary of Admissions to Hospital

Month	Cases	Deaths within 48 hours	Total Deaths
September	17	5	6
October	257	62	105
November	43	3	5
December	41	3	8
	<hr/> 358	<hr/> 73	<hr/> 124

There were instances as elsewhere in the state where entire families died of the disease. So many deaths occurred that it was necessary for the engineering department of the city to delegate employees for the purpose of digging graves at the local cemeteries.

After Care of Influenza Cases

In order to prevent complications following serious cases of influenza, work was carried on to furnish the necessary care and service to such cases. This service was started November 6, 1918.

The American Red Cross and all other unofficial agencies cooperated in this work and Miss M. C. Philips was placed in charge of this important phase of the epidemic. She organized the work placing volunteer agents in charge of seven districts into which the state was divided to facilitate the after-care activities. These agents were

Agent	Furnished by Organization
Miss Evangeline Lukens	Bridgeport Charity Organization
Mrs. Edwina B. Pim	New Haven Protective Association
Miss Alice Waldo	Conn. Children's Aid Society
Miss Caroline deF. Peniman	Conn. Industrial School for Girls
Miss Marjory Turner	Torrington Home Service Section
Miss Marjory Lyman	Hartford Charity Organization
Miss Mabelle C. Philips	American Red Cross

These agents worked through the 38 Red Cross Chapters in the State and its 276 branches.

It was hoped to obtain information from the chapters on the number of orphans and number of cases which needed after-care treatment, and cards were distributed for this purpose.

History Card

NAME	ADDRESS
No. in family	No. of Children under 16
Was father ill	DEATHS (Names)
Was mother ill
Other members of the family ill
Are all patients fully recovered	
Name of Physician	
Does family need	(1) Medical or Nursing Care
	(2) Relief or other assistance

History Card (Reverse Side)

To what extent has family income been affected.

HOUSING No. of Rooms
Sanitation

Church affiliations

(After Care Influenza Record) Name of Visitor

By November 30th, 84 cards were returned which stated that 249 (none in large cities) persons were in need of this care.

The plan of the work was explained in a circular sent to each of the local committees.

The Chapters in Ansonia, Bridgeport, Jewett City, Litchfield, Middlesex County, Naugatuck, New London, Norwich, Wallingford, Waterbury, Danielson, Hartford, Manchester, Meriden, New Britain, New Haven, Southington, Stratford, Westport and Willimantic formed committees for this work.

In nine other towns, Bristol, Danbury, Fairfield, Greenwich, Rockville, Stamford, Taftville, Torrington and Winsted, there were other social organizations carrying on this work.

Nine chapters in the state failed to organize and assist in the after-care campaign.

Several conferences were held with different organizations to present the intended scope of the work and methods for carrying on successfully the campaign.

At the end of December, 112 more cards were returned, stating 1,434 more patients were in need of care and had been visited.

Doubtless these figures are all too low as far as actual work that was accomplished in the state is concerned, as they do not include the large cities, but they serve to indicate the great number in need of assistance.

Results

From the work carried on it was ascertained that there were 3,124 children who had one parent dead and 199 children with both parents dead of influenza. It was estimated that 2,809 were in need of some form of assistance and this was readily given by some local organization.

Results of Epidemic

1. There were 115,567 cases and 8,907 deaths from influenza from August 1, 1918, to May 31, 1919.
2. There were 2,336 deaths from pneumonia from August 1, 1918, to May 31, 1919.
3. The closing of schools, theaters, churches and other public places had apparently no effect on diminishing the spread of the disease.
4. No influenza vaccine was found to be of any value as a prophylactic or in treating cases.
5. The epidemic showed the value of the newly organized State Department of Health in furnishing assistance to cities and towns in connection with the epidemic, both in field work and administrative matters.