FOR ADMINISTRATIVE USE

CDC INFLUENZA SURVEILLANCE REPORT

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SPECIAL NOTE

Information contained in this report is a summary of data reported to CDC by State Health Departments, Epidemic Intelligence Service Officers, collaborating influenza diagnostic laboratories, and other pertinent sources. Much of it is preliminary in nature and is intended for those involved in influenza control activities. Anyone desiring to quote this information is urged to contact the person or persons primarily responsible for the items reported in order that the exact interpretation of the report and the current status of the investigation be obtained. State Health Officers, of course, will judge the advisability of releasing any information from their own states.

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I. Summary of Information

Sharp, well defined outbreaks of respiratory illness, mild in character and affecting mainly children of school age, have continued to occur in several areas. Besides the B isolations previously reported in Maryland and Michigan, influenza B virus has been recovered from throat washings of cases in schools in Washington, D.C. Serologically confirmed outbreaks have been reported in Massachusetts, Indiana, Iowa, and Alabama. Epidemics of respiratory illness of etiology not yet identified have been reported in some counties in California, New York, Mississippi, and Georgia.

During the last three weeks, influenza and pneumonia deaths in 108 selected cities have leveled off at about 10% above the deaths reported the week ending February 14. They are still well within the "epidemic threshold" and far below the number reported during the corresponding period of last year when the country was experiencing the second wave of the A-2 epidemic.

In Europe, outbreaks are occurring in West Germany, Belgium, France, Switzerland, and England where a sharp increase in influenza and pneumonia mortality has been noted in the last three weeks. Strains similar to A-2 have been isolated in Bulgaria according to the WHO Weekly Epidemiological Record.

A comparison of several type B influenza strains by HI tests performed by Dr. R.Q. Robinson from the CDC Virus Laboratory in Montgomery, Alabama is presented.

(This report prepared by Dr. Mario Pizzi, Chief, Surveillance Section, CDC.)

II. Current Status of Influenza in the United States

Localized outbreaks of mild respiratory illness - compatible with influenza - have continued to occur in the last three weeks in different areas of the country and affecting mainly children of school age. Laboratory studies are being conducted in a number of these outbreaks, but the results are not yet available. Besides the B strains isolates previously reported (Influenza Surveillance Report 43) in Maryland and Michigan, two more B isolates were obtained in an outbreak among high school students in Washington, D.C. On February 20, Dr. F.M. Davenport, University of Michigan, isolated an influenza C strain from a fatal case of staph. lobar pneumonia in a 6 months old girl. Previous type C isolations had been reported in 1947 and 1950.

Influenza-like illness causing up to 50% school absenteeism was reported on February 26, in Denver and Jefferson County, Colorado. At the time of this writing the epidemic is subsiding. No viruses have been recovered from throat washings of some of the cases.

Dr. R.F. Feemster, State Epidemiologist, Massachusetts State Department of Public Health, reports high absenteeism in two schools in Belmont and one in Wellesley. These outbreaks have been serologically identified as being caused by type B.

The Alabama State Health Department reported on February 20, a serologically identified type B case.

An outbreak in a school in Roland, Iowa was identified serologically as due to influenza B by Dr. A.P. McKee, University of Iowa.

Dr. R.Q. Robinson, CDC Virus Laboratory in Montgomery, Alabama reported seven serologically confirmed influenza B cases from an outbreak in schools in northern Indiana.

Several outbreaks have been reported in California. An outbreak at Fort Ord is being studied by Dr. Lennette. In Alameda County absenteeism rates of 30-40% due to respiratory illness have occurred among the employees of a car assembly plant, and at the ski resort in Sqaw Valley approximately 50 cases of respiratory illness have occurred in the last three weeks among 240 employees. One school has been closed in Suffolk County, New York because of high absenteeism. In Maryland, the epidemic in Montgomery County passed its peak on February 27, according to a report from Dr. Charlotte Silverman, State Epidemiologist. Absenteeism rates of 18% as compared with 10% in the corresponding week of last year were being observed in Baltimore during the last week of February.

High absenteeism in schools is being reported in the Atlanta, Georgia area.

An outbreak of influenza-like illness has been reported in west central Mississippi.

Sporadic cases of respiratory illness are occurring in Texas, but no outbreaks have been reported so far.

There are no indications of influenza activity in Illinois and Florida.

The deaths from influenza and pneumonia in 108 cities have been for the last three weeks about 10% higher than those reported for the week ending on February 14, and are at the level of the week ending on January 31. However, they are still well within the limits of the "epidemic threshold." The same is true for each of the regions, with the exception of the West South Central which slightly exceeded the expected variation. Up to March 7, 4566 deaths from influenza and

pneumonia have been reported from these 108 cities, which can be compared with 6266 deaths for the corresponding period of 1958.

In summary there is evidence that influenza is becoming active in different areas of the country. Very few isolates of B strains have been made so far, and it is strongly urged that health departments collect throat washings from typical cases in order to get a better knowledge of the B strain spreading. Epidemiologically speaking, the fact that according to the information available so far, influenza is occurring mainly in children of school age suggests that these outbreaks are essentially due to influenza B. Although some influenza B activity was reported in 1951, no epidemics were reported that year, and the last identifiable B epidemic occurred in 1945-46. This being so, the current 0-13 years old population should have very little immunity and in view of its size (roughly 46 million) should contribute a substantial number of susceptibles.

III. Current Analysis of Influenza and Pneumonia Mortality*

Table 1. Current Influenza and Pneumonia Deaths in 108 United States Cities

Division	Number of Cities in Study Reporting this week	Deaths (including estimates**) during weeks ending: Jan. 31 (108 Cities)	Feb. 7 (108 Cities)	Feb. 14 (108 Cities)	Feb. 21 (108 Cities)	Feb. 28 (108 Cities)	Mar. 7 (105 Cities)
All Divisions	105	494	463	447	493	481	487
New England	13	41	42	45	39	49	47
Mid. Atlantic	16	130	138	114	131	131	132
E. North Central	18	98	103	88	115	95	99
W. North Central	8	57	28	38	33	29	26
S. Atlantic	9	33	34	27	41	41	44
E. South Central	8	35	29	30	33	31	33
W. South Central	13	46	44	57	44	45	58
Mountain	8	11	17	13	17	14	14
Pacific	12	43	28	35	40	46	34

* Prepared by the Statistics Section, CDC.

** The number of deaths given includes estimates for cities not reporting in a given week. The table is corrected for preceding weeks after receipt of late reports.

IV. Influenza in Europe

The WHO Weekly Epidemiological Record for the week ending February 27, states that influenza epidemics are occurring in West Germany where a few serological tests have been positive for influenza B. Mild influenza is occurring in Belgium and strains similar to A-2 have been isolated in Bulgaria. France and Switzerland continue to have outbreaks affecting mainly school children.

In England and Wales, the sharp increase in pneumonia and particularly in influenza deaths noticed on the week ending February 7, has continued rising steadily as can be seen in the table below.

Influenza, Pneumonia and Bronchitis Deaths

ENGLAND AND WALES - 1959*

	Influenza	Pneumonia	Bronchitis
January 3	21 (292)	845 (1233)	965 (1421)
10	41 (315)	773 (1177)	912 (1398)
17	33 (243)	802 (1032)	1125 (1253)
24	55 (217)	875 (992)	1123 (1239)
31	54 (204)	815 (1087)	1129 (1231)
February 7	144 (184)	986 (891)	1362 (1085)
14	455 (128)	1373 (944)	1532 (1023)
21	1121 (100)	1051 (819)	1909 (834)

Source: Weekly Influenza Statement - 1959 - No. 5-6, British Ministry of Health, London.

* Between parenthesis, the corresponding figures for 1958.

On the week ending February 7, the deaths from pneumonia for the first time were above those for the corresponding week of last year when England and Wales was experiencing its second wave of the A-2 epidemic. Influenza deaths bypassed the corresponding 1958 figure on the week ending February 14, and increased 11 fold on the week ending February 21, in

relation to the corresponding weeks in 1958. Out of the 1121 deaths from influenza reported on the week ending February 21, 952 were in persons aged 55 and over.

According to the above mentioned report, "Acute respiratory diseases have shown a further increase in many localities and influenza remains generally widespread. Pressure on general medical and hospital services has increased but there are indications that this may have reached its peak in some areas."

V. Comparison of Several Type B Influenza Strains by Hemoagglutination-Inhibition Tests

The results of HI tests performed by Dr. R.Q. Robinson from the CDC Virus Laboratory in Montgomery, Alabama, with several type B strains tested against Ferret and chicken antisera are presented below:

	Hemoagglutination-Inhibition Titer Against							
	B. Neth 45/59	B. Neth 46/59	B. Neth 47/59	B. Mol 1/59	B. Lee 40	B. Allen 45	B. G.Lakes 54	B. Huertig 55
FERRET* Antiserum against								
B.Lee 40	-	20	-	10	320	20	10	10
B.Allen 45	-	-	-	-	-	80	20	20
B.Great Lakes 54	80	80	40	160	20	40	640	320
Normal	-	-	-	-	-	-	-	-
CHICKEN** Antiserum against								
B.Allen 45	-	40	-	10	-	320	20	10
B.Great Lakes 54	40	80	200	80	20	80	160	160
B.Huertig 55	40	80	40	80	10	80	160	160
Normal	-	-	-	-	-	-	-	-

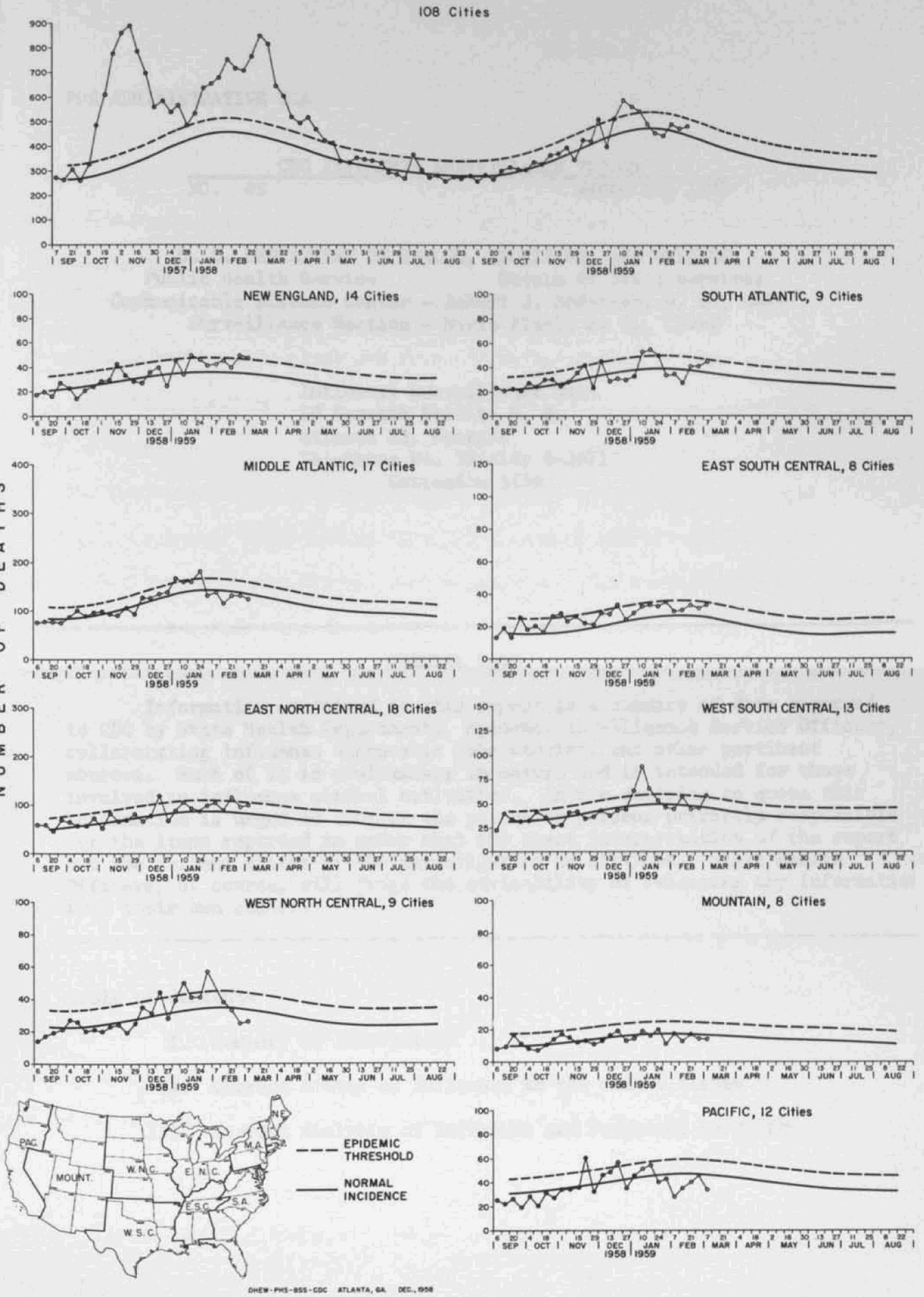
* All Ferret sera inactivated by mixing one-half volume of 0.8 per cent trypsin (Difco 1:250) in M/10 phosphate buffer at pH 8.2 with one volume of serum and holding at 56°C for 30 minutes.

** All chicken sera were inactivated by heating at 56°C for 30 minutes without addition of trypsin.

The 3 Netherlands strains as well as the Maryland strains seem to be closely related to the B. Great Lakes/54, and to the B. Huertig/55. The Netherlands 47/59 appears to be in E phase which accounts for the low activity.

CORRIGENDUM: In Influenza Surveillance Report No. 43, the B. Great Lakes/54 was incorrectly labelled B. Great Lakes/50.

Fig. 1: WEEKLY PNEUMONIA and INFLUENZA DEATHS
United States



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