

COMMUNICABLE DISEASE CENTER

# INFLUENZA

## SURVEILLANCE

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# PREFACE

Summarized in this report is information received from State Health Departments, university investigators, virology laboratories and other pertinent sources, domestic and foreign. Much of the information is preliminary. It is intended primarily for the use of those with responsibility for disease control activities. Anyone desiring to quote this report should contact the original investigator for confirmation and interpretation.

Contributions to the Surveillance Report are most welcome. Please address to:  
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## I. SUMMARY

Epidemic influenza is subsiding or quiescent in all States with the exception of Wyoming, where outbreaks of influenza-like disease in the northeastern part of the State are reported. The etiologic agent is not known as yet.

Oklahoma and Virginia have confirmed outbreaks of Influenza B, bringing the total number of States confirming Influenza Type B this season to 36. Louisiana and South Dakota report that no significant outbreaks of respiratory disease have occurred.

No new isolations of Influenza A<sub>2</sub> virus have been reported in the United States. None of the 6 isolations previously reported were identified with an outbreak.

Influenza A<sub>2</sub> continues in Europe and Asia. Czechoslovakia, Norway, and the Netherlands report outbreaks of Asian influenza. A report on the epidemic in Japan is included.

Acute encephalitis, possibly secondary to influenza, has resulted in several deaths. An attempt to gather data on similar cases has been initiated by Dr. W. D. Schrack, Jr., of the Pennsylvania Department of Health. He suggests that any information pertaining to this problem be sent to Influenza Surveillance, CDC, Atlanta.

Available laboratory evidence suggests that a lower temperature might be helpful for virus isolation in embryonated eggs in the absence of tissue culture facilities.

The number of deaths due to pneumonia and influenza in 108 cities reached the highest level of the current season this week.

## II. EPIDEMIC REPORTS

### 1. CALIFORNIA

A summary report of the respiratory illness that swept California this winter notes that the peak of school absenteeism was reached just before the Christmas recess. It was felt that the impact on the school children was approximately equal to, if not slightly greater than, that observed during the last influenza epidemic in January-February 1960.

Industrial absenteeism shows the effect of the epidemic a week or 2 later than the school absenteeism, but was not as elevated or as widespread. Total absenteeism among the employees of the State Department of Public Health in Berkeley rose from a normal 3 percent level to about  $4\frac{1}{2}$  percent in late December and early January. An oil company in the Bay Area with 3400 employees experienced over 5 percent (twice normal) absenteeism for the second week in January.

(Dr. Henry Renteln, Division of Preventive Medical Services, California State Department of Public Health; Dr. Harold Maller, EIS Officer, assigned to the California State Department of Public Health)

### 2. MAINE

No significant outbreaks of influenza-like disease have appeared in Maine to date with the possible exception of one outbreak of acute febrile respiratory disease coincident with school absenteeism of 40 percent in Kennebec County in late January.

(Dr. Dean H. Fisher, Director, Communicable Disease Control, Maine Department of Health and Welfare)

### 3. MARYLAND

An isolation of Influenza B has been made in Baltimore, apparently unassociated with a significant outbreak. The throat washing was obtained from the patient on February 23.

(Dr. John H. Janney, Acting Chief, Division of Epidemiology, Maryland State Department of Health; Mr. Stephen Eichler, Virus Section, Maryland State Department of Health Central Laboratory)

4. MINNESOTA

The incidence of influenza-like illness appears to be on the decline in Minnesota, following a peak in late January - early February. Twenty-four serologic titer rises to Influenza B have been obtained from patients in many counties (see map).

(Dr. D. S. Fleming, Director, Division of Disease Prevention and Control, Minnesota Department of Health; Dr. Henry Bauer, Director, Division of Medical Laboratories, Minnesota Department of Health)

5. MISSISSIPPI

Influenza-like disease is subsiding in northern Mississippi. Three Influenza B viruses were obtained from Keesler Air Force Base near Biloxi during January. They were isolated in monkey kidney tissue culture.

(Dr. William Mogabgab, Department of Infectious Diseases, Tulane University Medical School)

6. NEW HAMPSHIRE

Influenza-like illness appears to be subsiding in New Hampshire. An outbreak in Weare, Hillsboro County, has been reported. No confirmation of Influenza B has been made as yet.

(Dr. William Prince, Director, Bureau of Communicable Diseases, New Hampshire State Department of Health)

7. NEW MEXICO

Serologic titer rises to Influenza B from several cases occurring during January are reported from Bernalillo, Eddy, and Lea Counties in New Mexico.

(Dr. John B. Sherman, Director, Division of Preventive Medicine, New Mexico Department of Public Health; Dr. Daniel E. Johnson, Director, Public Health Laboratory, New Mexico Department of Public Health)

8. NEW YORK CITY

Weekly testing of pooled sera indicates that Influenza B has been prevalent in New York City during the current season. No significant outbreaks are known to have occurred.

(Dr. Harold T. Fuerst, Director, Bureau of Preventable Diseases, City of New York Department of Health)

9. OHIO

A questionnaire survey of the Ohio Department of Health personnel and their families was done in 1960 and repeated this year. The Asian virus was prevalent in 1960; Influenza B virus is responsible for the current outbreak in Ohio. Percent ill includes those persons with a serious cold (including fever, generalized sickness or sore throat).

<u>Age Group</u>	<u>Number at Risk</u>		<u>Percent Ill</u>	
	<u>January 1960</u>	<u>January 1962</u>	<u>January 1960</u>	<u>January 1962</u>
0- 9	189	229	39	58
10-19	117	145	13	49
20-29	158	227	49	42
30-39	131	176	26	39
40 and over	<u>239</u>	<u>343</u>	<u>25</u>	<u>26</u>
All ages	834	1120	31	41

10. OKLAHOMA

There has been little evidence of influenza in Oklahoma during the present season. Several probable outbreaks characterized by increased school absenteeism, were reported earlier (see Influenza Surveillance Report Nos. 65 and 66). There have been no further reports of outbreaks. An isolation of Influenza B was obtained at Tinker Field in Oklahoma County in recent weeks.

(Dr. Kirk T. Mosley, Commissioner of Health, Oklahoma State Department of Health; Dr. Herbert P. Reinhardt, EIS Officer, assigned to the Oklahoma State Department of Health; Major R. A. Crandell, 6075th Epidemiological Laboratory, Lackland A.F.B., Texas)

11. VERMONT

Three northern Vermont counties reported outbreaks of influenza-like disease peaking in late January (see Influenza Surveillance Report Nos. 66 and 67, map). An additional outbreak is reported from southern Vermont (Bennington County), one month later.

(Dr. Linus J. Leavens, Director, Communicable Disease Control, Vermont Department of Health)

12. VIRGINIA

Virginia has confirmed Influenza B in an outbreak in Southampton County in the southeastern part of the State.

(Dr. F. J. Spencer, Acting Director, Bureau of Communicable Disease Control, Virginia Department of Health; Mr. W. French Skinner, Director, Bureau of Laboratories, Division of Local Health Services, Virginia Department of Health)

13. WYOMING

An outbreak of influenza-like disease is reported from Gillette in Campbell County, adjacent to the outbreak reported last week (see Influenza Surveillance Report No. 69). School absenteeism is estimated to be 20 percent. In addition, there are large numbers of cases in Casper and Cheyenne, but no outbreaks have been reported.

(Dr. Cecil R. Reinstein, Director, Division of Preventive Medicine, Wyoming Department of Public Health)

## INTERNATIONAL

### 1. CANADA

A report of the epidemic in Sault Ste. Marie, Ontario has been received. Excerpts are quoted below:

"Towards the end of January 1962 it became evident to many practicing physicians in Sault Ste. Marie that they were seeing increasingly large numbers of patients suffering from an acute upper respiratory infection. The number of cases apparently increased quite rapidly in a short interval thereafter, and the Medical Officer of Health issued his first order for the closing of some schools on the 6th of February 1962. This order was based on a rule of thumb that the school was closed if the attendance fell below 80 percent of normal.

"The clinical symptoms of the cases noted in this outbreak followed a fairly typical pattern. The onset was sudden in most cases with headache, prostration, and fever between 101° - 103° which lasted for 2 to 3 days. The abrupt onset was usually followed by abdominal cramps and some cases were left with a dry cough after the fever subsided. The outbreak was almost exclusively restricted to school age children. Influenza virus of the B type has been isolated."

(Dr. G. E. Large, Provincial Epidemiologist, Ontario Department of Health; Dr. E.W.R. Best, Chief, Epidemiology Division, Department of National Health and Welfare, Ottawa, Canada)

### 2. JAPAN

A report on Asian influenza in Japan, dated February 10, 1962, has been received, and is quoted in full.

"At the end of January a possible mass outbreak of influenza had forced closures of many classes in more than 20 schools in Tokyo.

"This raised a strong suspicion on the possibility of influenza epidemic in this winter. This influenza-like disease has spread very rapidly among school children in the Metropolitan Tokyo area.

"As soon as this epidemic had appeared, the Tokyo Public Health Laboratory urgently examined to identify it, and confirmed on the 7th of February that it was due to Influenza A<sub>2</sub> virus.

"By the 7th of February around 30% of schools in Tokyo was affected as follows:

<u>Schools</u>	<u>No. of Schools</u>	<u>No. of Schools Affected</u>	<u>No. of Classes Closed</u>
Kindergarten	78	14 (29%)	
Primary School	975	312 (34%)	680
Middle School	472	131 (28%)	544
High School	130	19 (15%)	91
Other School	<u>12</u>	<u>3 (19%)</u>	<u>        </u>
Total	1,667	479 (30%)	1,315

"According to the reports from local governments A<sub>2</sub> virus was also confirmed in Kanagawa and Gumma Prefectures of the Kanto District. The A<sub>2</sub> influenza epidemic has already spread through the Kanto District and now invading all over our country.

"It is reported that clinical symptoms of the disease are rather mild as compared to that of the A<sub>2</sub> epidemic in 1957.

"Main complaints are fever (38-40°C), headache, lumbago, throat pain, anorexia, nausea, vomiting, diarrhea, nasal bleeding, etc.

"Duration of illness is 3-4 days. Four deaths of old aged men and 1 death of a 5-month-old baby were seen in Tokyo by now."

Since this time, over 100 influenza-associated deaths have been unofficially reported from Japan.

(Dr. Shinichi Matsuda, Chief, Department of Epidemiology, Institute of Public Health, Tokyo, Japan)

### 3. CZECHOSLOVAKIA

During the second half of January influenza-like disease spread from Prague to involve areas throughout Czechoslovakia. Thirty isolations of Influenza A<sub>2</sub> (Asian) virus have been reported.

(Prof. Raska, Influenza Center, Prague, Czechoslovakia, through the World Health Organization, Geneva, Switzerland)

#### 4. NETHERLANDS

A military garrison in the Netherlands reported an outbreak of acute respiratory illness during the week of February 11. Three strains of Influenza A<sub>2</sub> were isolated.

(Prof. Dr. J. Mulder, Academisch, Ziekenhuis, Leiden, Netherlands)

#### 5. NORWAY

In early February, an outbreak of Influenza A<sub>2</sub> (Asian) occurred in Bradufoss in northern Norway.

(Dr. Arild Harboe, National Institute of Public Health, Oslo, Norway)

### III. ENCEPHALITIS, POSSIBLY SECONDARY TO INFLUENZA

A letter describing 4 encephalitis deaths has been sent by Dr. W. D. Schrack, Jr., Director, Division of Communicable Disease Control, Commonwealth of Pennsylvania, to all State and Territorial Epidemiologists. He suggests that each State might collect information on cases with similar histories. These data will be analyzed by Influenza Surveillance, CDC, Atlanta.

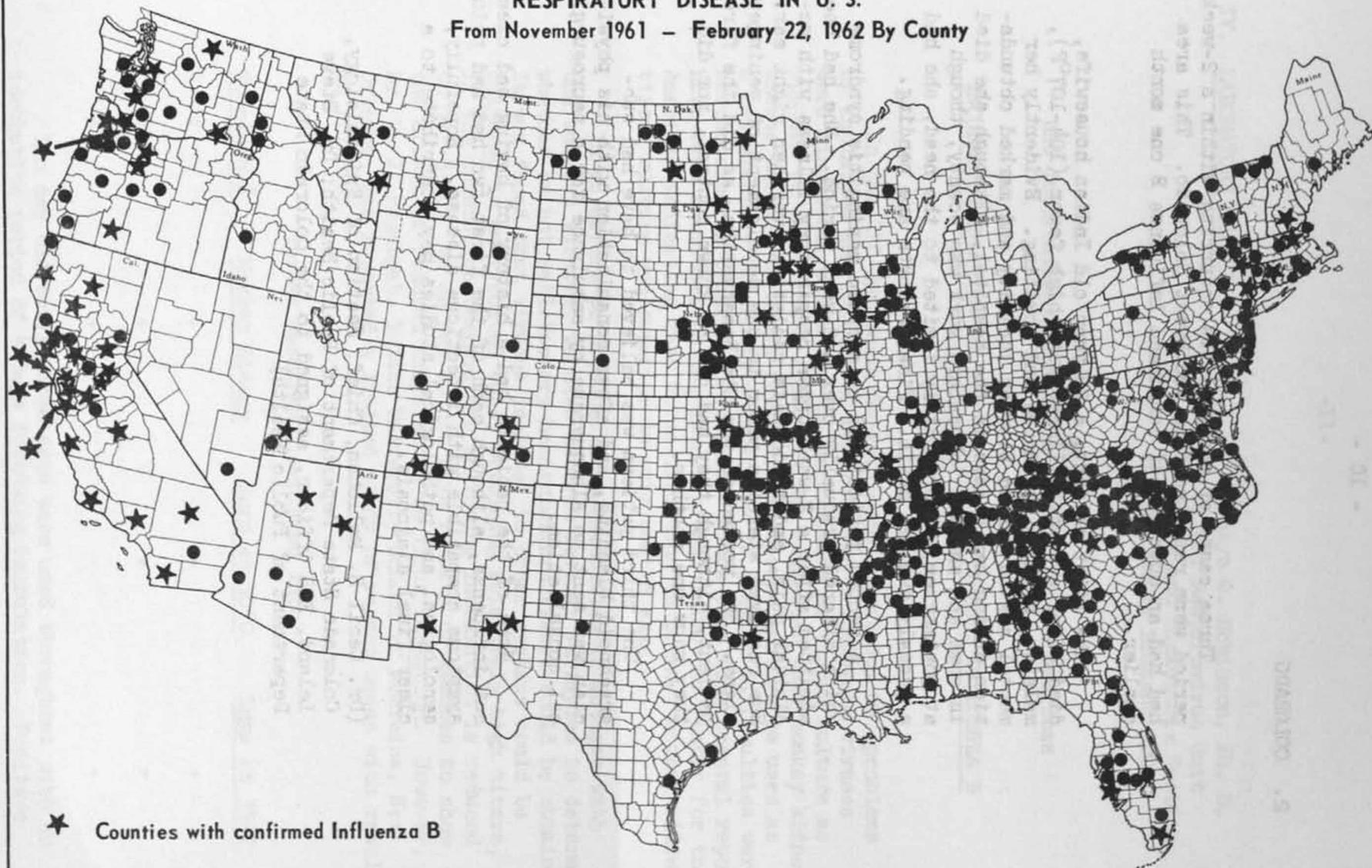
#### 1. PENNSYLVANIA

During the latter part of January, 4 deaths occurred in children in the Harrisburg area. In each instance the child had previously had a relatively mild respiratory illness of 3-6 days' duration. In at least 3 instances, the patient seemed to be on the road to recovery when fever, vomiting, and hyper-irritability occurred. Drowsiness developed rapidly, the patients were hospitalized; their course was rapidly downhill with death occurring approximately 48 hours after the onset of vomiting.

Three post-mortem examinations were performed, and were diagnosed as encephalitis.

(Dr. W. D. Schrack, Jr., Director, Division of Communicable Disease Control, Pennsylvania Department of Health)

**RESPIRATORY DISEASE IN U. S.**  
From November 1961 - February 22, 1962 By County



★ Counties with confirmed Influenza B

● Counties with reported outbreaks of acute respiratory disease

## 2. COLORADO

Three cases of encephalitis occurring within a 2-week period were reported from southwest Colorado. This area had had an outbreak of confirmed Influenza B one month earlier.

The first patient, a 30-year old Indian housewife, died after a 2-week illness with high fever (104-107°F), malaise, myalgia, headache and vomiting. Evidently her mental status varied between lucidity and marked obtundation during her 8 days in the hospital, although she died in coma and shock. Laboratory work was scanty, though at postmortem, unfortunately limited to the head, she had a grossly swollen brain. Final reports are pending.

A second patient had an aseptic meningitis syndrome which cleared gradually over a 2-week period. She had been admitted after a 2-week upper respiratory illness with occipital pain, and tenderness radiating over her right ear. She received steroids prior to the development of meningeal signs. She worked on the Ute Reservation, as did the first patient, although they had had no known contact, nor did they know one another.

The third patient was believed to have had sub-arachnoid bleeding, and after consultation with his physician was sent to Albuquerque by ambulance for a neurosurgical consultation.

None of the patients had a history of having had clear-cut influenza, although each of the first two had had prior symptoms compatible with infectious disease. Hopefully, serological and pathological studies may contribute to a clear final diagnosis.

(Dr. Cecil S. Mollohan, Chief, Section of Epidemiology, Colorado State Department of Public Health; Dr. Steve Leland, EIS Officer, assigned to the Colorado State Department of Public Health)

IV. LABORATORY REPORT

Roslyn Q. Robinson, Ph. D.  
Chief, Respirovirus Unit  
Virus and Rickettsia Section  
Laboratory Branch, CDC

Serving as  
WHO International Influenza Center for the Americas

INCUBATION TEMPERATURE FOR CULTURE OF CURRENT INFLUENZA B  
VIRUSES IN EGGS

In the CDC Influenza Surveillance Report No. 64, problems of isolation and culture of current type B influenza viruses were discussed, stressing the superiority of tissue culture as opposed to embryonated eggs. It was suggested that monkey kidney tissue culture or human fetal kidney tissue culture be used as a satisfactory alternative procedure if similar difficulties were encountered in other laboratories. Since that time several reports have been submitted to the International Influenza Center for the Americas indicating that virus isolation in primary monkey kidney tissue culture was superior to embryonated eggs.

In an effort to produce large quantities of antigen with the current viruses, we have altered several variables to determine whether or not satisfactory hemagglutinin titers could be obtained. It was found that viruses isolated in other systems could be cultured in embryonated eggs, obtaining relatively high titers, if the incubation temperature following inoculation is reduced to 31°-33°C. We as yet do not have results of studies to show the effect of reduced temperature on virus isolation. However, Dr. W. J. Mogabgab, Tulane University School of Medicine, New Orleans, has reported a limited study of recent cases with results as follows:

Throat Washings Inoculated Into:

<u>Specimen #</u>	<u>Monkey Kidney</u>	<u>Eggs at 30°C</u>	<u>Eggs at 35°C</u>
1	+	+	-
2	+	+	-
3	+	-	-

Ten day old embryonated eggs were used throughout with an incubation period of 4 days following inoculation. Positive

results in eggs were obtained in second passage, while negative results were recorded after 3 passages. This experience again indicates the superiority of monkey kidney tissue cultures, and Dr. Mogabgab suggests that a lower temperature might be helpful for virus isolation in the absence of tissue culture facilities.

V. WEEKLY PNEUMONIA AND INFLUENZA DEATHS

The number of deaths due to pneumonia and influenza in 108 cities reached the highest level of the current season this week. For the first time this season the New England and Middle Atlantic States reported figures in excess of their respective epidemic thresholds. The number of pneumonia and influenza deaths in the adjacent East North Central division, which has been in excess of epidemic levels for the past three weeks, rose precipitously this past week; the West North Central States, which had reported a decline in the number of deaths the previous week, recorded an upward trend this week.

The South Atlantic, East South Central, West South Central, and Mountain States, which during the current season have reported figures above threshold levels, this week fell to expected numbers. The Pacific States are and have been well within normal ranges for the past six weeks.

# WEEKLY PNEUMONIA AND INFLUENZA DEATHS

