

CDC INFLUENZA SURVEILLANCE REPORT  
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SPECIAL NOTE

Information contained in this report is a summary of data reported to the Communicable Disease Center by State Health Departments, Epidemic Intelligence Service Officers, the influenza diagnostic laboratories collaborating with the WHO International Influenza Center for the Americas, and other pertinent sources. Much of it is preliminary in nature and is intended primarily 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

Influenza B has been identified in outbreaks of respiratory illness in eight States. They are California, Oregon, Washington, Arizona, Colorado, Missouri, Illinois, and Florida. Utah has reported outbreaks of respiratory disease; specimens have been collected and are being analyzed in the laboratory. In Canada, the Province of Saskatchewan has confirmed epidemics of Influenza B. Several areas in England and Wales have reported outbreaks associated with the Influenza B virus.

No confirmed outbreaks of Asian influenza have been reported in either Canada or the United States during the present season.

No significant excess pneumonia and influenza mortality has been reported for the United States during the current influenza season, either nationally or by region. Influenza deaths in England and Wales, by contrast, have been steadily rising.

Preliminary strain analysis comparing present with past strains of Influenza B indicates some antigenic change between present strains and the B/Great Lakes/1954 strain. However, typing of isolates or serodiagnosis should not present difficulty using the materials previously supplied by the WHO Influenza Center for the Americas.

## II. EPIDEMIC REPORTS

### 1. CALIFORNIA

California continues to confirm the presence of Influenza B among the outbreaks of respiratory disease that have occurred throughout the State. As of January 1, 1962, 21 paired sera were found to be positive for Influenza B. The sera were obtained from patients in nine counties, all in the Greater San Francisco or Los Angeles area. School absenteeism continues a slight downward trend but is still higher than normal in most counties. Several key industries in California, regularly reporting weekly or monthly absenteeism figures, indicate that there has been no unusual absentee rate, and that the proportion of respiratory illness among absentees has not increased. Large outbreaks of influenza-like illness are occurring in several rural counties, but appear to be on the wane in urban areas. Deaths from influenza and pneumonia in key California cities remain below average.

The Pomona area, east of Los Angeles, reports that a wave of respiratory illness began in early November, and has affected the high school population more than any other group, although all age groups have been affected. A State correctional school in Chino was involved in this outbreak, with 30 of the 900 students being diagnosed as clinical influenza; many others had milder respiratory illness. Four serologic titer rises to Influenza B were obtained from patients at this school.

An outbreak of respiratory disease among high school students in Santa Clara County was investigated just before Thanksgiving. Three of seven paired sera tested have been positive for Influenza B. However, one was also positive for adenovirus, and one had 1:16 convalescent titers to both Influenza A and B. The vaccination status of this case is unknown. Elsewhere in the same county, an outbreak of conjunctivitis was studied among high school pupils. No virus isolation has been achieved but two children had serologic evidence of Influenza B.

(California Surveillance Report: Influenza, Report Nos. 2 and 3; Dr. Henry Renteln, California State Department of Public Health)

## 2. OREGON

A total of six counties in western Oregon has reported outbreaks of respiratory disease. Attack rates have been highest among the school age population. Surveillance of industrial absenteeism in the Portland area indicates scattered cases of influenza-like disease among employees with slightly increased absenteeism in one of eight companies only. Laboratory studies on blood specimens from some communities have been carried out. Ten paired sera have shown significant rises to Influenza B virus.

(Dr. Grant Skinner, State Epidemiologist, Oregon State Board of Health)

## 3. WASHINGTON STATE

Eleven counties scattered widely throughout the State report outbreaks of respiratory disease. Several schools in each of these counties have reported 20 percent or greater absenteeism. In Lewis County, clinical evaluation of 37 patients, 22 of school age, eight adults, and three in the pre-school group was reported. The predominant symptoms found were retro-orbital headache, sore throat, cough, and conjunctivitis. Other symptoms experienced by at least 20 percent of the patients were photophobia, coryza, abdominal pain, and myalgia. Pharyngeal injection was usually present, without exudation or vesiculation; the uvula in many was particularly injected and edematous. The illness lasted two to five days. Laboratory studies confirm Influenza B in outbreaks in southwestern Washington.

(Dr. Ernest Ager, Communicable Disease Control, Washington State Department of Health)

## 4. ARIZONA

In addition to the outbreaks of Influenza B on Indian reservations in northeast Arizona, there have been two reports of note. In Phoenix, two of the fourteen school districts closed 2 days early for the Christmas holidays, because of the large number of absentees.

Estimates indicate that 25 percent of the students had been affected by an influenza-like illness.

In Parker, on the Arizona border adjacent to California, Public Health Service field clinics were seeing 40 to 50 cases of the disease daily in early December. Recent clinic attendance was thereby doubled.

(Dr. Emory Johnson, Division of Indian Health, U. S. Public Health Service; Dr. Jack B. Eason, Arizona State Department of Health)

## 5. UTAH

Small outbreaks of influenza-like disease have been reported from southwest Utah. Communities in Cedar City and Parowan, both in Iron County, are involved. During the last few days of school prior to Christmas, some elementary school classrooms in the town of Parowan had absentee rates as high as 50 percent. Physicians in the area noted that in some households all members of the family were ill. Signs and symptoms included a productive cough, sore throat, headache, nausea, dizziness, chilly sensations, and a moderate fever. Nine throat washings and eight acute blood specimens were obtained from early cases. The number of cases is presently subsiding.

(Dr. A. A. Jenkins, Acting Director, Community Health Services, Utah State Department of Health)

## 6. COLORADO

School outbreaks of influenza-like disease beginning in late November have extended to involve a number of schools in south central and southwestern Colorado. Outbreaks in south central Colorado have been confirmed as Type B Influenza; laboratory examination of specimens from other areas is in progress.

Studies in the Durango area reveal that school absentee rates rose in late November from 5 percent to 10 to 14 percent at which level they persisted up to the time of the Christmas school closing. In only one of the schools did absentee rates exceed 20 percent. During

the December period from 45 to 55 percent of children in the different schools were absent for varying periods, the majority with respiratory disease. In the separate schools, the outbreaks appeared to move on a classroom by classroom pattern with absentee rates in the individual rooms ranging from 30 to 50 percent on peak days. Absentee rates in the high schools were somewhat lower than in the elementary schools. Although a number of the teachers were afflicted, adult illness appeared to be relatively infrequent. The five commercial firms in Durango reported no increase in absenteeism and physicians reported seeing few adult cases.

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

## 7. MISSOURI

Outbreaks of acute respiratory disease in Missouri have been multi-focal. Communities reported to be involved are Potosi, St. Louis, Jefferson City, Boonville, Columbia, and Cape Girardeau. In general, the illness affected junior high school students first, high school students second, and elementary school pupils last. School attack rates up to 40 percent were noted. Influenza B has been isolated from cases in Potosi and Jefferson City.

### Potosi Epidemic

The Potosi outbreak has been characterized in some detail through studies carried out by a team from the Kansas City Field Station, CDC, and the Missouri Department of Public Health. The following is abstracted from the report of Drs. Jack Poland and David Rush:

Potosi is the county seat of Washington County, located 65 miles southwest of St. Louis. The area is in the foothills of the Ozark Mountains; its economy is based on mining, farming, and shoe manufacturing.

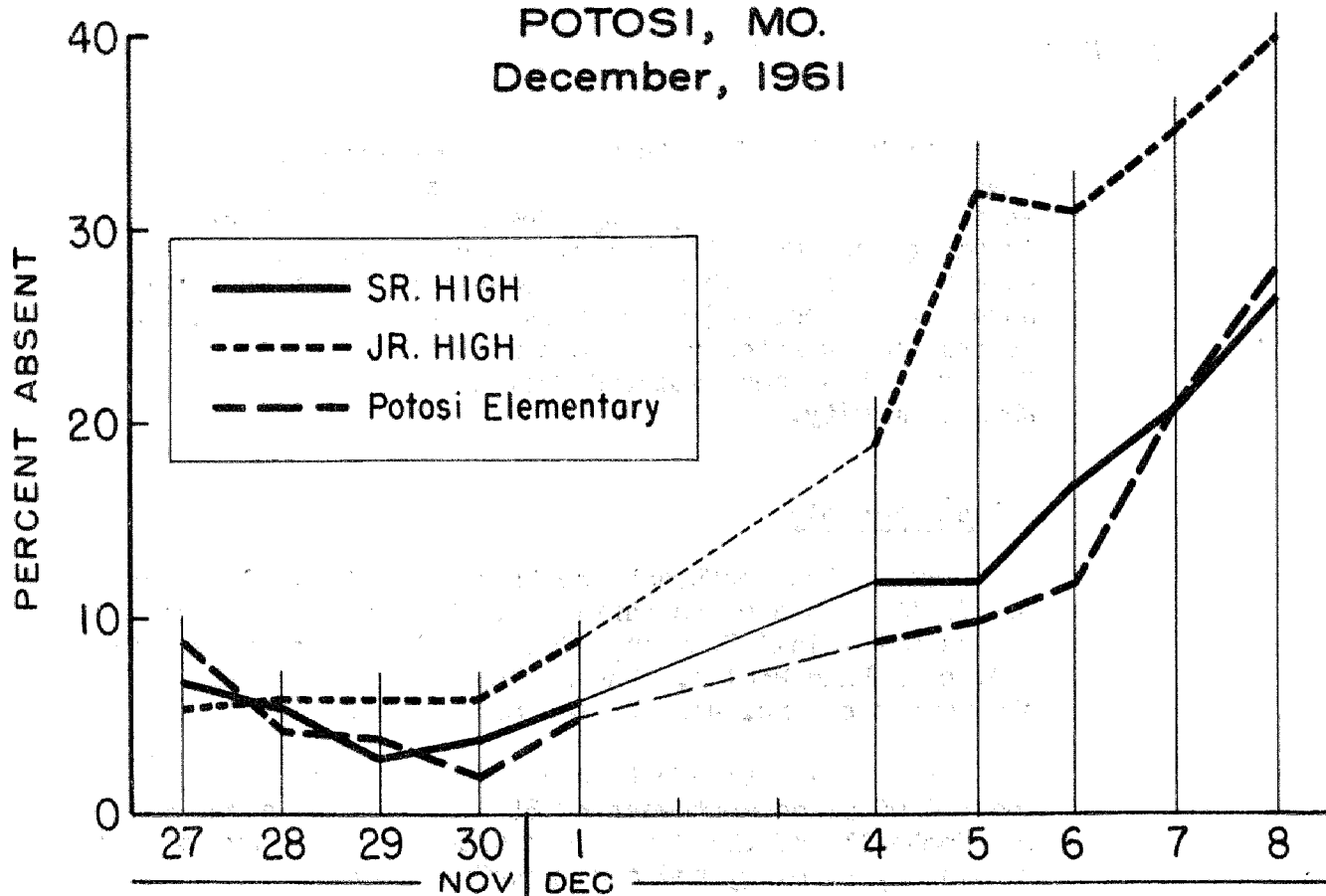
The 14,000 residents of the county are served by two general practitioners and two osteopaths. There are no

hospitals but public health facilities are excellent. There is much unemployment; 14 percent of the residents of the county received welfare in 1960.

The town's four physicians were visited. They described illnesses characterized by fever of 101-103° F, chills, cough, myalgia, coryza, sore throat, and headache, running a three to four day course when not complicated by pneumonia or bronchitis. The doctors estimated that they had seen over a dozen cases of pneumonia. Throat washings and sera were collected in the Potosi area from cases of acute disease. Type B Influenza virus was isolated from seven individuals.

School absenteeism in the Potosi schools is depicted below.

### SCHOOL ABSENTEEISM POTOSI, MO. December, 1961



It can be seen that absenteeism for the week of December 4-8 was highest in the Potosi Junior High School (seventh



and eighth grades). The elementary school and the senior high lagged a few days behind. A snowstorm closed the schools on Monday, December 11.

Peak absenteeism in all schools in Potosi reached at least 40 percent. The school administrators, having interviewed all absent students, felt this was due almost entirely to acute respiratory infections.

In order to assess adult morbidity more accurately, every fifteenth number in the Potosi phone book was used for an illness survey. After eliminating business and discontinued numbers, 63 households remained. Sixty were contacted between December 15 and 18 by one of the physicians on the team. All household members were listed; and it was inquired whether they had been sick since Thanksgiving, what had been their symptoms, and whether they had been vaccinated against influenza.

#### Age Specific Attack Rates for Clinical Influenza

(Telephone Survey)

<u>Age</u>	<u>Total Persons</u>	<u>Number Ill</u>	<u>Attack Rate (%)</u>
0-5	24	9	38
6-12	36	20	56
13-18	24	12	50
19-35	33	9	27
36-50	41	11	27
51+	51	5	10

In spite of the small sample, there is a clear pattern of the school age group showing the highest incidence (50-56 percent) with progressively lower rates with age. The number of people vaccinated was too small to draw conclusions about vaccine effectiveness.

(Dr. David Rush and Dr. Jack Poland, Communicable Disease Center, Kansas City, Kansas; Dr. E. A. Belden, Communicable Disease Control, Missouri Department of Public Health)

## 8. ILLINOIS

Marked school absenteeism has been noted in schools in Jackson and Union Counties in southwestern Illinois. Absentee rates have ranged between 20 and 40 percent. Influenza B has been isolated from cases in this area.

(Dr. Norman J. Rose, Chief, Bureau of Epidemiology, Illinois Department of Public Health; Dr. Tom Chin, Kansas City Field Station, CDC)

## 9. FLORIDA

Increased school absenteeism was reported from widely separated counties in Florida immediately before Christmas. These counties are Broward in the southeast, and Duval and Flagler Counties in the northeast. Paired sera and throat swabbings have been obtained from cases in Duval County. Laboratory results are not yet available.

(Dr. James O. Bond, Director, Bureau Preventable Diseases, Florida State Board of Health)

## 10. CANADA

Except for the widespread epidemic in Saskatchewan and a small outbreak reported in British Columbia, Canada has remained relatively free of influenza-like illness to date.

### BRITISH COLUMBIA

School absenteeism up to 30 percent has been reported from Greenwood, a small community in British Columbia bordering an involved county in the State of Washington. An acute influenza-like illness began about November 15. Symptoms were runny nose, headache, listlessness, sore throat, occasional fever, and mild digestive upset. Recovery occurred within 5-10 days, but 60 percent of the patients had a relapse, usually with runny eyes and earaches, occasionally with mastoiditis and pneumonia.

(Dr. E. W. R. Best, Chief, Epidemiology Division, Department of National Health and Welfare, Ottawa, Canada)

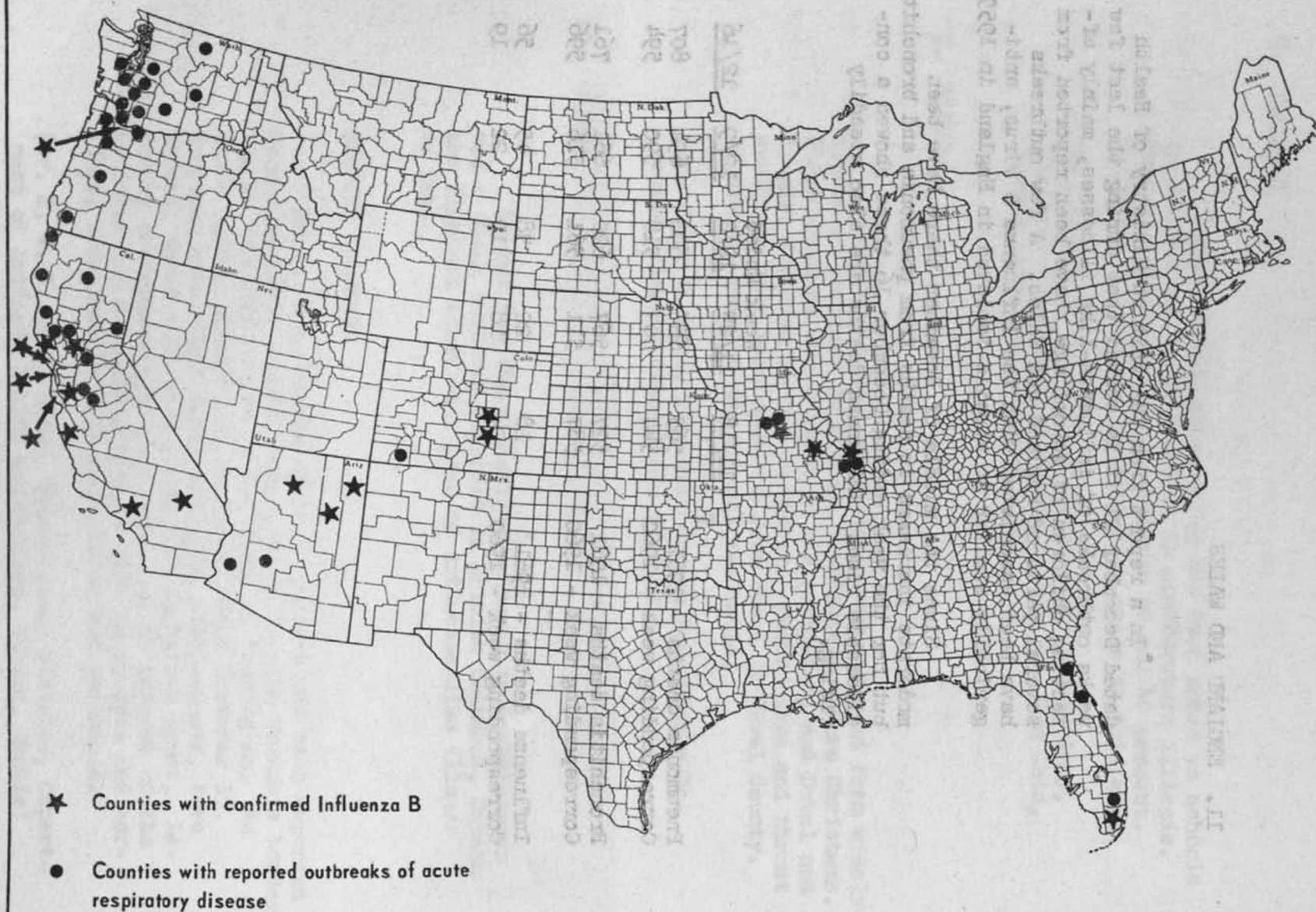
## 11. ENGLAND AND WALES

In a report from the British Ministry of Health dated December 21 it is stated that during the last few weeks outbreaks of influenza-like illnesses, mainly affecting children of school age, have been reported from several parts of England and Wales. A few outbreaks have been associated with the Influenza B virus, antigenically similar to strains isolated in England in 1959.

Since the middle of November there have been moderate increases in deaths from pneumonia and bronchitis, but for the week ending December 16 these showed a considerable rise. Influenza deaths are also steadily rising.

	Week Ended				
	<u>11/18</u>	<u>11/25</u>	<u>12/2</u>	<u>12/9</u>	<u>12/16</u>
Pneumonia deaths - 1961	565	666	696	694	807
Corresponding week - 1960	544	603	518	590	594
Bronchitis deaths - 1961	527	567	620	661	761
Corresponding week - 1960	587	511	561	516	596
Influenza deaths - 1961	18	22	38	45	56
Corresponding week - 1960	24	18	19	22	19

# RESPIRATORY DISEASE IN U. S.



III. PRESS RELEASE - From the Office of the Surgeon General,  
December 16, 1961

Dr. Luther L. Terry, Surgeon General of the Public Health Service, said today that the Service's Communicable Disease Center in Atlanta had just completed a survey of all the States to determine the up-to-date influenza situation.

So far there are only four confirmed outbreaks of the disease. These are in Florida, California, Arizona, and Colorado. Five other States reported outbreaks that may be flu. These are Alaska, Connecticut, Illinois, Missouri, and Oregon. There has also been an outbreak reported from Canada.

Most of these outbreaks are occurring in school children.

Dr. Terry emphasized the need of the chronically ill and aged to receive immunization. He called on physicians to use the scarce supply of vaccine for these three groups who are at greatest risk of serious complications.

"Although children will be the bulk of the population getting sick, flu is a relatively mild disease with them as it is with most healthy adults," Dr. Terry said. "All of the confirmed outbreaks so far have been Type B. This had been expected because of the periodicity of the disease. The strain of virus that is causing flu is not a new strain and many adults have had exposure to this virus before," Dr. Terry said.

Preliminary data acquired this year indicates that the frequency of illness in adults is relatively much lower than in children. The Surgeon General emphasized that this is the time of year when there is a great deal of upper respiratory disease and although many people may be sneezing and coughing, this does not necessarily mean they have flu.

IV. LABORATORY REPORT - Antigenic Variation

It was reported earlier (CDC Influenza Surveillance Report #61, December 19, 1961) that while a slight antigenic difference had been noted with Asian influenza viruses isolated in 1961, when compared to 1957 strains, little if any variation had been noted among type B strains. Several recent type B isolates have been tested by the hemagglutination-inhibition technique (HI) using antisera prepared against several type B strains isolated in earlier years. Reactions which might be expected in the typing of current isolates are as follows:

<u>Antigen</u>	<u>Antiserum</u>				
	<u>B/Lee</u>	<u>B/Allen</u>	<u>B/GL</u>	<u>B/Huertig</u>	<u>B/Md.</u>
B/Lee/40	320	10	20	20	40
B/Allen/45	15	160	20	160	40
B/GL/1739/54	20	10	160	160	40
B/Huertig/55	20	5	80	240	40
B/Maryland/1/59	20	20	40	160	160
1961-1962 type B isolates	20	20	40	160	160

Reciprocal cross reactions using antiserum prepared against 1961-1962 type B isolates will be published in this report as soon as such sera are available.

While these preliminary results do indicate some antigenic change from B/GL/1739/54, the current type B antigen and antiserum provided to WHO Influenza Program Collaborating Laboratories for diagnostic and typing purposes, there should be no difficulty encountered in typing isolates by HI, or in serodiagnosis by either HI or complement fixation tests using the materials supplied.

Similar results have been reported from the World Influenza Center, London, using strains currently being isolated in the United Kingdom.

(Prepared by Dr. Roslyn Q. Robinson, Director, WHO Influenza Center for the Americas, Atlanta, Georgia)

#### V. WEEKLY PNEUMONIA AND INFLUENZA DEATHS

Pneumonia and influenza deaths for the week ending December 30 are normal for the United States as a whole. Although there were rises above the epidemic threshold in four regions (W. N. Central; Mountain; Pacific; and W. S. Central) in recent weeks, these cannot be considered significant. Significance is achieved only when deaths exceed the epidemic threshold for two or more consecutive weeks.

(This report was prepared in the Surveillance Section, Communicable Disease Center, by George C. Denniston, Jr., M. D., Chief, Influenza Surveillance Unit, with the assistance of the Statistics Section, Robert E. Serfling, Ph.D., Chief.)

# WEEKLY PNEUMONIA AND INFLUENZA DEATHS

