

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.

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I. SUMMARY

Epidemics of influenza-like disease are presently widespread in several areas of the Eastern and Middle Western United States. The first confirmed outbreak of the current season began in early January in Robeson County in southern North Carolina.

Since that time one or more outbreaks of influenza-like disease have been reported from the District of Columbia and 34 States including Alabama, Arizona, Arkansas, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, and Wisconsin. Influenza A₂ virus has been isolated or confirmed by serologic titer rise as the causative agent in one or more outbreaks in the District of Columbia and 17 States including Connecticut, Delaware, Georgia, Illinois, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, South Carolina, Virginia, and Wisconsin.

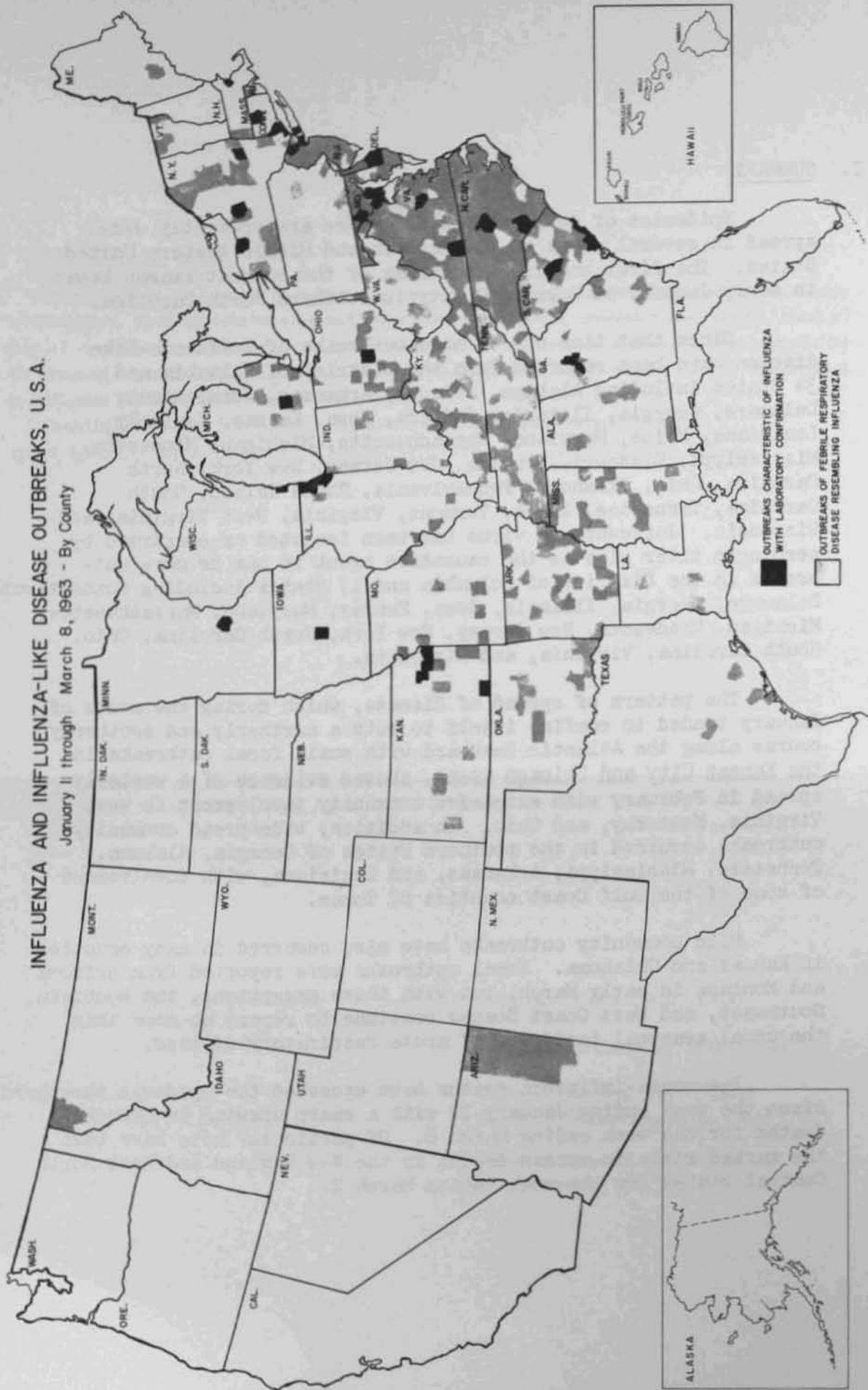
The pattern of spread of disease, which during the month of January tended to confine itself to both a northerly and southerly course along the Atlantic Seaboard with small focal outbreaks in the Kansas City and Chicago areas, showed evidence of a westerly spread in February with extensive community involvement in West Virginia, Kentucky, and Ohio. In addition, widespread community outbreaks occurred in the southern States of Georgia, Alabama, Tennessee, Mississippi, Arkansas, and Louisiana, with involvement of some of the Gulf Coast counties of Texas.

Mild community outbreaks have also occurred in many counties in Kansas and Oklahoma. Focal outbreaks were reported from Arizona and Montana in early March, but with these exceptions, the Mountain, Southwest, and West Coast States continue to report no more than the usual seasonal incidence of acute respiratory disease.

Pneumonia-influenza deaths have exceeded the epidemic threshold since the week ending January 12 with a sharp upswing in excess deaths for the week ending March 8. Of particular note have been the marked rises in excess deaths in the New England and East North Central States for the week ending March 2.

INFLUENZA AND INFLUENZA-LIKE DISEASE OUTBREAKS, U.S.A.

January 1 through March 8, 1963 - By County



■ OUTBREAKS CHARACTERISTIC OF INFLUENZA WITH LABORATORY CONFIRMATION

□ OUTBREAKS OF FEBRILE RESPIRATORY DISEASE RESEMBLING INFLUENZA

II. EPIDEMIC REPORTS

Alabama:

Outbreaks of influenza-like illness were reported from six counties, representing several different geographic regions during the week ending February 23. Case reports for that week totaled approximately 8800 as compared to previous weekly totals averaging 150. Illness has caused temporary school closings in two counties (Macon and Marshall) thus far. Laboratory studies are in progress.

(Reported by W. H. Y. Smith, M.D., Director, Bureau of Preventable Diseases, Alabama State Health Department).

Arkansas:

Respiratory disease outbreaks were reported from 16 of the State's 75 counties for the week ending March 1. Among those most seriously affected was Union County on the Louisiana border where 20% absenteeism was noted in elementary and high schools. Excess absenteeism, with school closings, was observed in at least 3 other counties as well. The epidemic illness was clinically compatible with influenza in most areas although laboratory confirmation is not yet available.

(Reported by J. T. Herron, M.D., State Health Officer, and William L. Bunch, Jr., M.D., Director, Division of Communicable Disease Control, Arkansas State Health Department).

Arizona:

An outbreak of influenza-like illness has been reported from the town of Springerville (Apache County) with abrupt onset of illness about February 19. The two elementary schools and one high school serving the area were forced to close on March 1 because of excessive absenteeism. The illness, which has shown community-wide spread, is characterized by abrupt onset of fever, headache, myalgia, and cough of 3-4 days duration. Laboratory specimens are currently being obtained.

(Reported by Lloyd N. Farner, M.D., Commissioner of Public Health, State Department of Health, Phoenix, Arizona).

An outbreak of acute febrile respiratory disease has been reported from the Hopi and Navajo Indian Reservations in the northern part of the State. The epidemic has centered in the area about Keams Canyon and began about February 23 when an increasing number of patients with acute onsets of fever, myalgia,

Arizona (continued)

headache, and weakness were seen in the outpatient clinics at the Keams Canyon Indian Hospital. In the last 10 days, over 400 patients with this symptomatology have been seen in the hospital clinics. All age groups have apparently been affected. Laboratory specimen collection and epidemiologic investigation are presently under way.

(Reported by W. S. Baum, M.D., Medical Officer in Charge, PHS, Division of Indian Health, Area Medical Office, Phoenix, Arizona).

Georgia:

The recent outbreak of influenza-like illness at the University of Georgia (Influenza Surveillance Report No. 74) subsided early in February without evidence of significant spread to the surrounding community of Athens. Throat washings were obtained from seven patients near the end of the epidemic period. Clinically, these cases were somewhat less typical of influenza than those seen at the height of the outbreak--their complaints being largely those of pharyngitis, with relatively little in the way of constitutional symptoms such as malaise, myalgia or chills. Two virus isolates have been obtained from these cases thus far; one has been identified as influenza A₂, the other as parinfluenza type 1. Serologic studies on these patients are currently in progress.

Epidemic influenza was recognized in the Atlanta area during the first week of February. The clinics of the Grady Memorial Hospital reported a sharp increase in the number of patients presenting with acute febrile respiratory disease during this period. Total adult visits to the emergency clinics for influenza-like illness, by day, is given for a part of the epidemic period in Figure 1. Excessive absenteeism was reported from several elementary and high schools in the area at about the same time, with at least one school closure known. Percentage absenteeism, by day, during the epidemic period, is given for one large suburban high school in Figure 2. A telephone survey of 50 absentees at this high school, chosen by random sample from 348 students absent on February 21, revealed influenza-like illness in 49 (98%). Frequency of symptoms of the illness in these 49 absentees is shown in Table 1.

Georgia (continued)

Table 1

Symptom	Number	Percent
Fatigue and weakness	42	86
Fever (Range 100-103)	36	74
Sore throat	35	71
Cough	34	69
Headache	30	61
Myalgia	28	57
Coryza	28	57
G.I. Complaint	9	18

Throat washings and acute sera were obtained from 11 cases in the Grady Hospital clinic population. Virus isolates, identifiable as influenza A₂, have been recovered from two of these cases thus far.

Additional outbreaks of influenza-like illness have been reported from Screven, Douglas, and Ware Counties. Specimens have been obtained from these areas and are currently being processed in the State laboratories.

(Reported by W. J. Murphy, M.D., Director, Epidemiology, Georgia Department of Public Health, and a team from the Communicable Disease Center).

FIGURE 1.

ADULT VISITS FOR INFLUENZA-LIKE ILLNESS
TO EMERGENCY CLINIC, GRADY MEMORIAL HOSPITAL
FEB. 9 - FEB. 22, 1963 by day

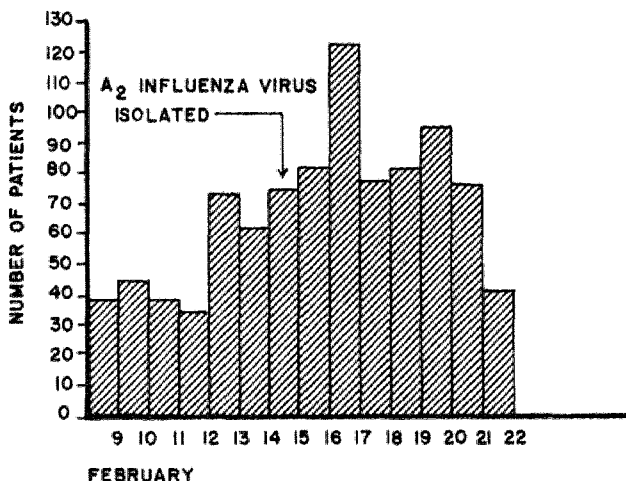
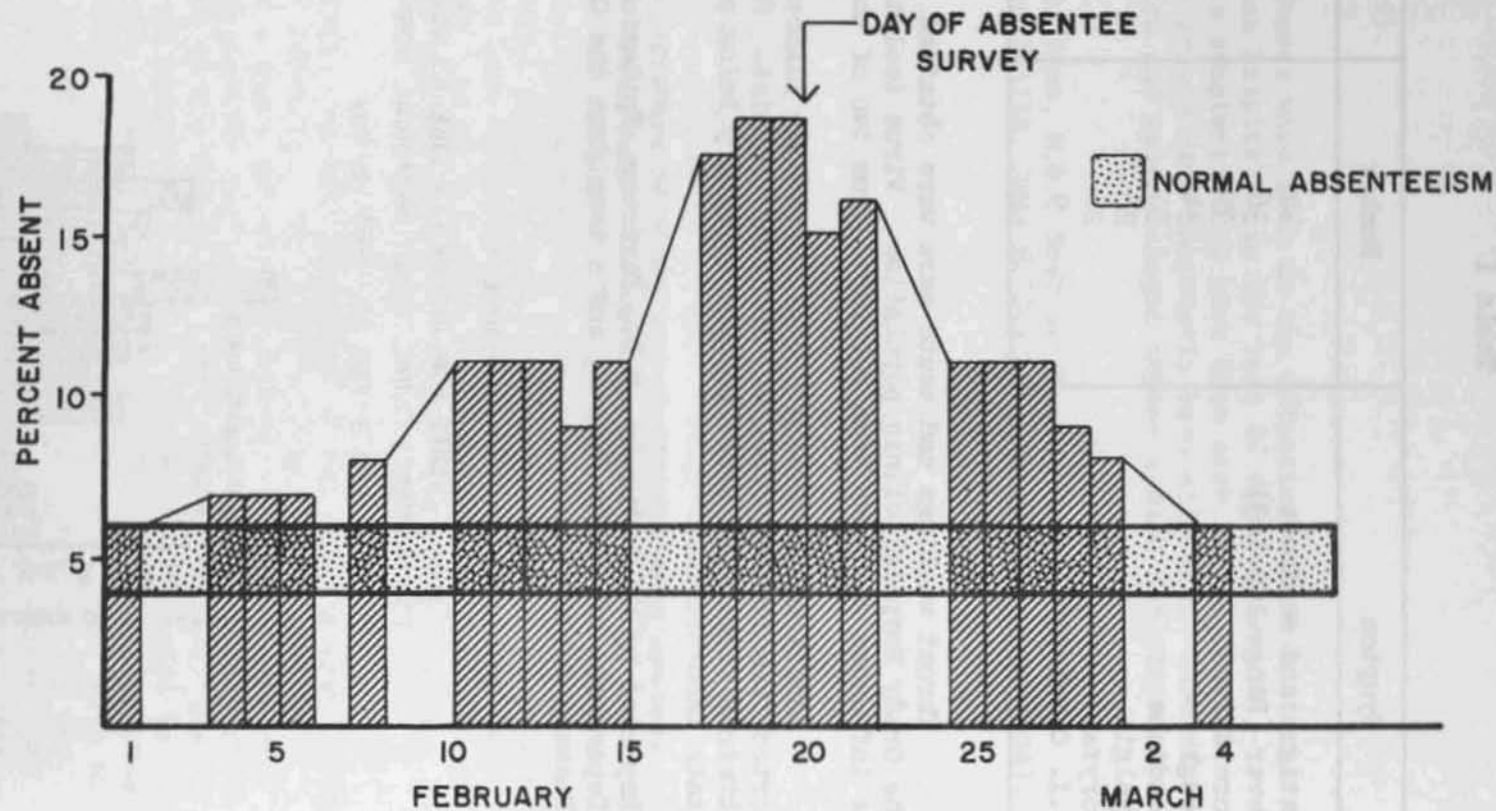


FIGURE 2.

SCHOOL ABSENTEEISM
HIGH SCHOOL "B"-DEKALB COUNTY, GEORGIA
BY DAY - FEBRUARY - MARCH '63



Iowa:

On February 8, about 12 cases of influenza-like illness suddenly occurred in a State Hospital and school in central Iowa. The illness was self limited and did not spread to other patients in the institution which has a total population of 1290. Three serum pairs from the cases showed a fourfold or greater rise in influenza A₂ antibody titer. The institution has conducted an intensive influenza immunization program for the last few years, and it is believed that this program has been directly responsible for the failure of the illness to become more widespread. Other areas of the State have, to date, failed to show more than sporadic occurrences of febrile respiratory illness.

(Reported by Ralph H. Heeren, M.D., Director, Division of Preventable Diseases, Iowa State Department of Health).

Louisiana:

Three Louisiana parishes reported influenza-like illness during the week ending February 16. Local physicians described cases as typical of influenza, although confirmatory laboratory studies are still in progress. School absentee rates as high as 30 percent were described with some suggestion of early spread to neighboring parishes.

(Reported by John M. Bruce, M.D., Chief, Section of Epidemiology, Louisiana State Board of Health).

Maryland - Follow-up and Summary:

The outbreak of influenza in Maryland began in metropolitan Baltimore in late December and early January, reached its peak in the central part of the State during the second week of February, and is now declining. The pattern of spread of disease has been fan like, beginning in Baltimore City and county and involving, in quick succession, counties in all quadrants of the State. In the metropolitan Baltimore area, peak incidence of disease occurred during the period January 23-30. Peak incidence in counties in other parts of the State did not occur until the second week in February. Baltimore City health officials have estimated, on the basis of survey of a sample of the Baltimore population, that since January 1, 40% of the city's population had respiratory illness resembling influenza.

Maryland (continued)

Total pneumonia-influenza deaths in Maryland, during the first 8 weeks in 1963, numbered 380. The expected number was 169. This represents a higher number of deaths than recorded for the comparable periods of the last 7 years. The total deaths from all causes during the first 8 weeks in 1963 was 35 percent higher than the number recorded for the same period in 1962.

To date, 12 influenza A₂ isolates have been obtained from patients in the Baltimore area. Two A₂ isolates have also been obtained at Fort Detrick. The State laboratories are in the process of identifying 30 more hemagglutinating agents.

Family influenza questionnaire forms have been distributed to Police and Fire Departments and elementary and high school study groups, and data on age specific attack rates in the Baltimore area will be forthcoming at a later date.

(Reported by John H. Janney, M.D., Acting Chief, Division of Epidemiology, Maryland Department of Health, and Robert E. Farber, M.D., Baltimore City Health Department).

Missouri:

Epidemic respiratory disease, compatible with influenza was reported during the latter part of February from the city of St. Joseph in western Missouri. A similar syndrome has been observed at a military base in neighboring Jackson County. These areas lie adjacent to known sites of laboratory confirmed influenza in eastern Kansas. Additional outbreaks, largely confined to school populations, have occurred in two other widely separated counties. Laboratory specimens are being collected.

(Reported by E. A. Belden, M.D., Communicable Disease Consultant, Missouri Department of Health).

Montana:

An outbreak of acute febrile respiratory disease resembling influenza has been reported from the town of Eureka (Lincoln County) with onset about February 15. The outbreak has been community-wide,

Montana (continued)

and characterized by sudden onset of fever, headache, myalgia and cough of 4-5 days duration. One death in an elderly woman has been reported. Over 600 cases have occurred to date. Specimens are being collected. Serologic evidence of infection with A₂ influenza virus has been obtained from one student at the University of Montana at Missoula. There is as yet no evidence however, of an unusual increase in febrile respiratory disease at this institution.

(Reported by Mary E. Soules, M.D., Director, Disease Control, Montana Board of Health).

New York:

Restricted outbreaks of influenza-like illness were first recognized February 11-14 in 3 small communities in the Albany-Troy-Schenectady area. Additional foci were noted during the weeks February 8-22 in 2 mental institutions in the southeastern part of the State. During the week of February 17, increasing evidence of influenza-like disease was noted in the cities of Rochester, Buffalo and Binghamton. Increased school absenteeism has been noted in Cayuga, Syracuse, Rensselaer, Otsego, Allegany, Hamilton, St. Lawrence and Steuben Counties during the weeks of February 18 and 25.

Serologic evidence of A₂ influenza infection has been obtained from 3 cases in Nassau and Westchester Counties and in 1 case from Columbia County. Six paired sera from individuals in the city of Syracuse have shown significant rises in influenza A₂ antibody titer, and 6 of 10 paired sera collected in Rochester have demonstrated similar rises. A₂ influenza virus has been isolated from 2 individuals in Albany County.

(Reported by Robert M. Albrecht, M.D., Director, Epidemiology Division, New York Department of Health).

Special Report: County Nursing Home - New York State

During the week of February 28, a county nursing home and infirmary in upstate New York began to notice an increasing number of cases of febrile respiratory disease among its residents. The institution has a resident population of 103, and by February 17, 29 individuals had become ill, 4 of whom died.

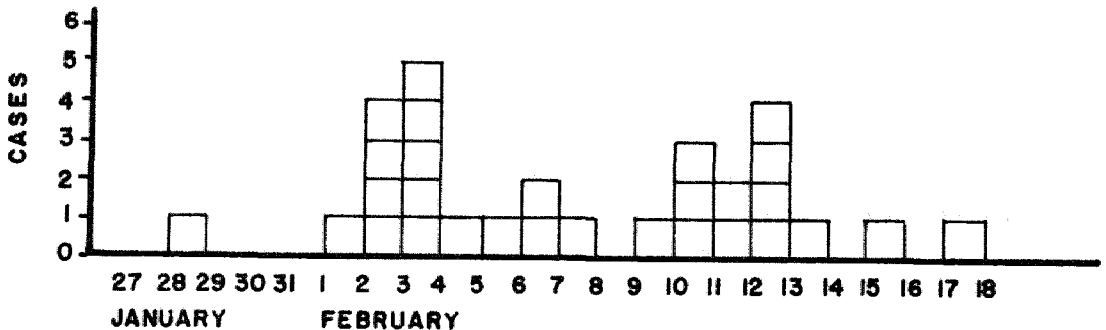
Special Report - County Nursing Home, N. Y. (continued)

The institution serves the aged indigent population of the county, and except for several terminal or incapacitated patients, almost all residents are over 75 years of age. At the time of the outbreak, there were 78 patients in the infirmary under constant nursing care and 26 residents in the home which is a self care unit. Because many of the infirmary patients were ambulatory enough to take meals in a common dining room, there was daily contact between patients in the infirmary and residents of the home.

The illness, which spared the working staff, was characterized by sudden onset of fever (101-103°F), mild generalized aching, weakness and perspiration, moderate cough, with 4-5 patients developing signs of pneumonia. Gastrointestinal symptoms were rare. The illnesses were of short duration, usually lasting only 1 day. Figure 3 gives the epidemic curve and Table 2 shows the differential attack rates for the home and the infirmary.

FIGURE 3.

ACUTE FEBRILE RESPIRATORY DISEASE
COUNTY NURSING HOME AND INFIRMARY - NEW YORK
BY DATE OF ONSET



Special Report - County Nursing Home, N.Y. (continued)

Table 2

Residence	Population	Cases	Average Age Cases	Attack Rate Percent
County Home	25	5	77	20
Infirmary	78	24	83	29
Total	103	29	82	28

The mean age of cases was 83 years. For the 4 deaths in the group, the mean age was 93 years. Two deaths were due to broncho-pneumonia. One was certified as due to "grippe" and the fourth was certified as due to bronchitis and glossitis. All but 5 of the 29 cases received polyvalent influenza vaccine in 2 doses in October and December 1962.

Table 3 shows the average monthly deaths at the institution for 1957-62 as compared with 1962-63.

Table 3

Month	1957-62 Mean. No.	1962-63 No.
August	3.2	2
September	3.2	5
October	4.7	6
November	3.0	1
December	5.5	5
January	3.8	1
February	3.7	7
March	5.0	-
April	3.2	-
May	3.7	-
June	3.0	-
July	2.8	-

Special Report - County Nursing Home, N. Y. (continued)

February 1963 is the 6th time in the last 11 years when there have been 7 or more deaths in the institution in a single month. The other 5 months were during the winter season of 1957-58 and 1961-62, when influenza epidemics occurred in this country.

At the time the outbreak was investigated, there were no acutely ill patients and specimens for virus isolation were not collected. Single sera from a group of patients ill in early February and from a group ill in mid-February have been collected to ascertain if there are significant differences in mean titer for influenza A and B between the two groups.

(Reported by David Rush, M.D., EIS Officer, assigned to the Public Health Research Institute for Chronic Disease, University of Buffalo, Buffalo, New York).

Rhode Island:

Outbreaks of influenza-like illness have been noted in Providence and Newport Counties beginning in early and mid-February. One private boys' school, with 4 percent normal absenteeism in the Woonsocket area, demonstrated an abrupt rise to 23 percent on January 22. The absentee curve is given in Figure 4. The major cause of absenteeism was a respiratory illness characterized by sudden onset of shaking, chills, headache, malaise and fever (to 104°F) lasting 2-3 days. Most cases developed a non-productive bronchial cough about the third day of illness. One-third of cases complained of sore throat. Some cases suffered brief episodes of nausea and vomiting.

Table 4 gives the results of hemagglutination inhibition tests performed with convalescent sera drawn on February 27 from six representative cases.

Rhode Island (continued)

FIGURE 4.

SCHOOL ABSENTEEISM
PRIVATE SCHOOL - RHODE ISLAND
FEBRUARY 1963

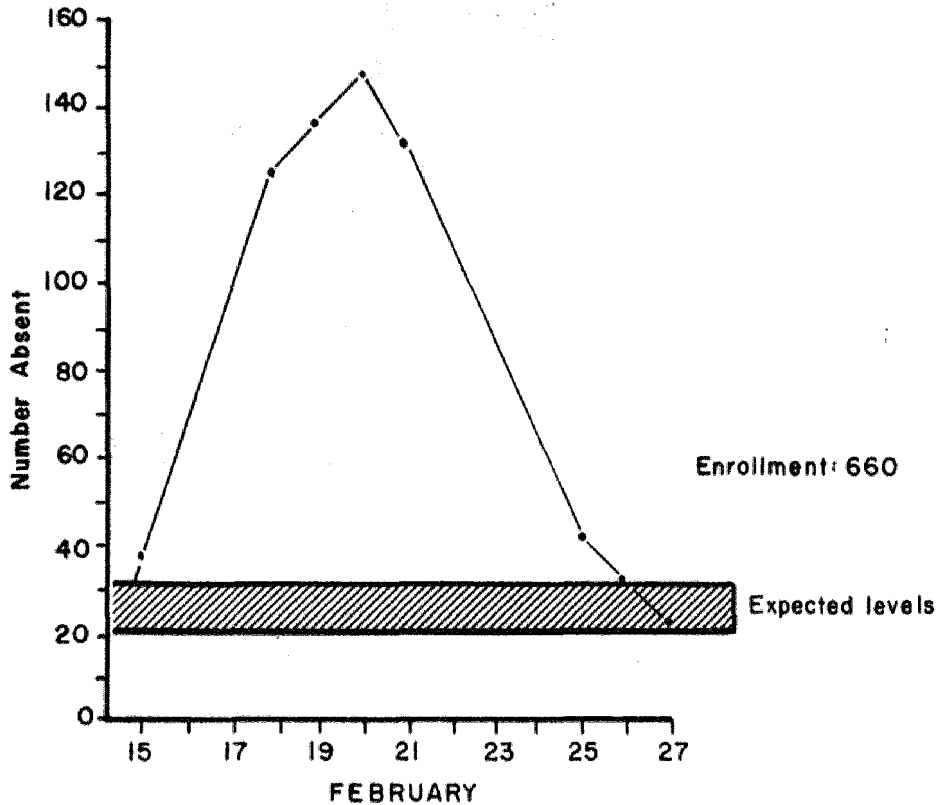


Table 4

Patient	Onset of Symptoms	Titers		
		A ₂ /Jap/305/57	B/Md/1/59	A ₁ /Denver/57
A	2/14	320	80	Neg.
B	2/15	320	80	Neg.
C	2/18	320	20	Neg.
D	2/15	320	10	Neg.
E	2/13	40	20	80
F	2/15	320	160	10
A ₂ /Jap	Control	320	Neg.	Neg.
B/Md	Control	Neg.	320	Neg.
A ₁ Denver	Control	Neg.	Neg.	320

(Reported by Raymond F. McAteer, M.D., Assistant Director of Health, Rhode Island Department of Health; Edgar J. Staff, Dr. P.H., Acting Director of Laboratories, Rhode Island Department of Health; and Earl Byrne, M.D., EIS Officer assigned to the Rhode Island State Department of Health).

Wisconsin:

Milwaukee:

An outbreak of influenza-like illness has been noted at the Veterans Administration Hospital in Milwaukee, with onset about February 11. Serologic evidence of influenza A₂ infection was obtained in paired sera from 2 patients. Since that time, influenza-like illness has occurred in epidemic proportions throughout the city. During the week of February 18, paired sera obtained from 6 persons employed in an office in Milwaukee demonstrated significant rises in influenza A₂ antibody titer in three instances.

Other areas of State report sporadic cases of influenza-like disease, with no unusual school or industrial absenteeism.

(Reported by E. R. Krumbiegel, M.D., Commissioner of Health, City of Milwaukee Health Department and Josef Preizler, M.D., Director, Bureau of Communicable Diseases, Wisconsin State Board of Health)

Tennessee:

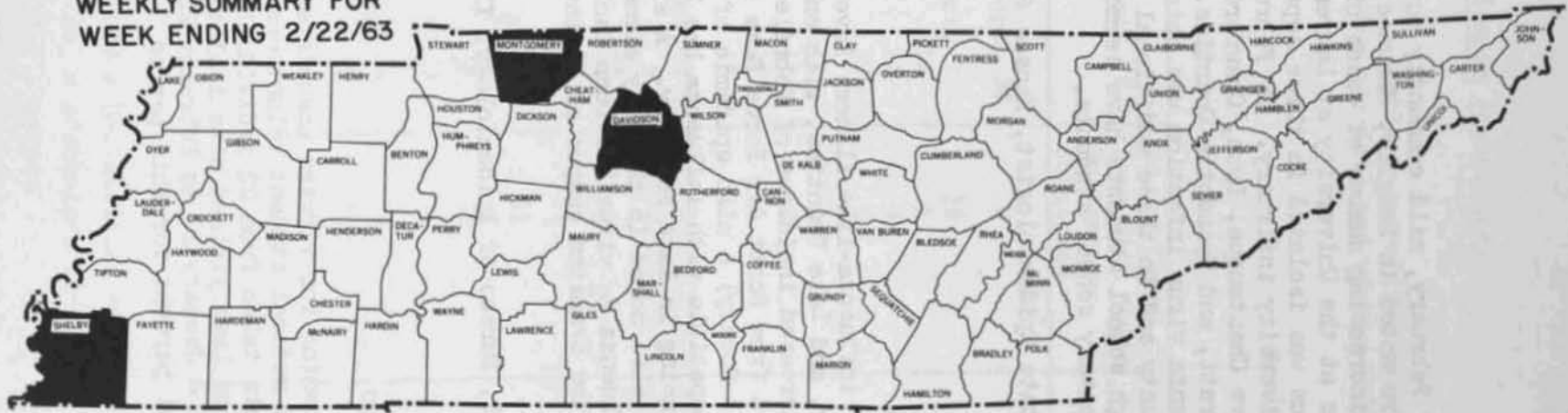
A general increase in the incidence of influenza-like disease has occurred in the State, beginning about the middle of February. Shelby and Montgomery Counties were the first involved, with the cities of Memphis and Clarksville exhibiting unusual increases in school absenteeism. The outbreak in Memphis appeared to be community-wide, and a number of hospitals in the area had sharp rises in patient visits to emergency rooms with symptomatology compatible with influenza. One large industry reported absenteeism of 5 percent above normal. The illness spread rapidly to many of the counties in the State, and for the week ending March 2, 34,858 cases were reported, with 14,441 in west Tennessee, 8,034 in middle Tennessee, and 12,383 in east Tennessee. Figure 5 demonstrates the spread of disease through the State. Laboratory specimens have been collected and are being processed.


(Reported by Cecil B. Tucker, M.D., Director, Division of Preventable Diseases, Tennessee Department of Health)


Figure 5.

TENNESSEE--INFLUENZA EPIDEMIC

WEEKLY SUMMARY FOR
WEEK ENDING 2/22/63



 INCREASED INCIDENCE INFLUENZA-LIKE DISEASE
LESS THAN 500 CASES REPORTED

 INCREASED INCIDENCE INFLUENZA-LIKE DISEASE
500 OR MORE CASES REPORTED



WEEKLY SUMMARY FOR
WEEK ENDING 3/1/63

Kansas :

During the first two weeks of February, mild community outbreaks of influenza-like illness were noted in Douglas, Shawnee, and Johnson Counties. In addition, an increasing number of cases of this illness was seen among students at the University at Lawrence (Douglas County). A₂ influenza virus was isolated in three separate instances from cases seen at the University infirmary. By February 22, outbreaks had extended to involve Chautauqua, Lyon, Crawford, Ness, Franklin, Bourbon, Kearney, Pratt, and Wyandotte Counties. Laboratory confirmation of A₂ influenza virus infection was obtained in three instances in Chautauqua County and in three additional cases in Douglas County. In all areas high school students have seemed to be more severely affected than elementary school students.

(Reported by Don E. Wilcox, M.D., State Epidemiologist, Kansas State Board of Health).

Illinois :

Limited community outbreaks of influenza-like illness have been noted in Champaign, Franklin, Jersey, and Lake Counties, with onsets in mid-February. In addition, an increased incidence of febrile respiratory illness has been reported from Scott Air Force Base in Lebanon, Illinois. In Evanston (Cook County) a mild epidemic of respiratory illness with symptoms compatible with influenza has been seen among high school students beginning in late February. A significant increase in absenteeism was also noted in the city elementary schools during the same period. Influenza A₂ virus has been isolated on three occasions from students on the Evanston campus of Northwestern University.

(Reported by Norman Rose, M.D., Chief, Bureau of Epidemiology, Illinois Department of Public Health).

Special Report - University of Chicago

In a program of continuous screening for viruses associated with acute respiratory disease in 117 medical student volunteers at the University of Chicago, throat swabs taken from 22 individuals reporting with acute respiratory symptoms have yielded nine isolations of influenza A₂ virus during the period January 27 to February 22. This indicates an isolation rate of 41 percent for this period of time.

Illinois (continued)

Table 5 summarizes pertinent data concerning this study during the fall and winter 1962-63.

Table 5

Week of	No. of Cases Seen With Acute Specimens Submitted	Positive Isolations	
		Influenza A ₂	Other*
Sept. 30	9	-	8 UCV
Oct. 7	26	-	15 UCV
14	8	-	4 UCV
21	4	-	-
28	6	-	2 UCV
Nov. 4	3	-	-
11	3	-	1 UCV
18	11	-	3 UCV
25	10	-	1 H
Dec. 2	8	-	1 UCV; 1 A4; 1 P1
9	2	-	-
16	3	-	-
23	-	-	-
30	11	-	-
Jan. 6	11	-	-
13	7	-	2 UCV
20	8	-	1 UCV; 1 H; 1 P1
27	4	1	1 UCV; 1 H; 1 P1
Feb. 3	3	-	Data incomplete
10	10	6	Data incomplete
18	5	2	Data incomplete

* UCV = Unclassified common cold viruses

A4 = Adenovirus Type 4

H = Herpes

P1 = Parainfluenza 1

Illinois (continued)

From the table, four significant waves of upper respiratory disease occurred during the fall and winter 1962-63. During October 1962, mid-November through early December 1962, late December 1962 through early January 1963, and mid-February 1963, such increased incidence of respiratory illness prevailed. The majority of the respiratory illness during the time period surveyed in the table have been characterized by coryzal symptoms and no fever, with the exception that since January 28, those individuals from whom influenza A₂ virus was isolated have had symptoms characterized by high fever, chills, headache, coryza, cough, anorexia, myalgia, and prostration of a few days duration. Evidence here indicates that there has been a definitely increased incidence of respiratory illness of an influenzal character, with a high percentage of positive isolations of influenza A₂ virus occurring in late January and during February in this group of volunteers. Since the volunteers live in the community, their illness experience may well reflect the occurrence of influenza in the city of Chicago during this time period.

Twenty-five percent of the volunteers had obtained complete influenza vaccinations during late 1962. Not a single vaccinated individual in the group to date has acquired febrile respiratory illness in which influenza A₂ virus has been isolated.

The University of Chicago virus laboratory has obtained 19 influenza A₂ isolates, nine from the above volunteers, and the rest from patients in the Outpatient Department and the Student Health Service at the University. All individuals from whom isolates have been obtained have suffered influenzal symptomatology.

(Reported by John J. Procknow, M.D., Department of Medicine, University of Chicago).

Connecticut:

An outbreak of respiratory illness compatible with influenza occurred in early February among elderly patients in a convalescent home in Fairfield County. Paired sera obtained from 4 patients during the outbreak showed significant rises in influenza A₂ anti-body titer. Since that time mild outbreaks of influenza-like illness have occurred over much of Hartford and Fairfield Counties, causing little school absenteeism in either county but some industrial absenteeism in Hartford County. Since the beginning of February, 8 paired sera from Fairfield County and 12 paired sera from Hartford County have shown significant rises in titer to A₂ influenza virus.

(Reported by James C. Hart, M.D., Director, Division of Preventable Diseases, Connecticut State Department of Health).

III. LABORATORY REPORT

Roslyn Q. Robinson, Ph.D.
Chief, Respirovirus Unit and
WHO International Influenza Center
for the Americas
Virology Section, Laboratory Branch
Communicable Disease Center

Type B Influenza - Taiwan. An outbreak of respiratory disease at the Taipei Provincial Children's Hospital, Taiwan, in October 1962, was investigated by LCDR Irving J. Green, MSC, USN. The disease appeared to be a mild febrile upper respiratory illness with sore throat and cough usually present, but with no significant chest findings. From 14 throat swabs, 4 type B influenza viruses were isolated. While LCDR Green was able to identify these viruses readily as type B influenza using hyperimmune rooster antiserum, it was found in our laboratory that they reacted poorly, or not at all, with ferret antiserum prepared by a single immunization against B/Great Lakes/1739/54 and B/Maryland/1/59. Dr. H. G. Pereira, at the World Influenza Center in London, has determined the antigenic relationship of these most recent isolates to strains isolated in earlier years. Table 6 presents results obtained in complement fixation tests which clearly indicate that the Taiwan isolates are type B influenza viruses by virtue of their reactivity with type specific guinea pig antiserum. However, when the strains are compared in the strain-specific hemagglutination inhibition test (Table 7), it is found that the Taiwan strains are antigenically quite different from earlier type B strains. Dr. Pereira concludes, "You will see from the results of complement fixation and hemagglutination inhibition tests that the strains are clearly identified as influenza B, forming a homogenous group antigenically distinct from former B strains." For those who are unfamiliar with the B/England/9/54 and B/Johannesburg/33/58 viruses, they may be translated as B/Great Lakes/1739/54 and B/Maryland/1/59, respectively.

When currently isolated influenza viruses exhibit a distinct departure from the antigenic constitution of viruses of the same type which were previously present, it is a matter of immediate interest to learn whether or not antibody induced by current vaccination is reactive with the variant strain. Table 8 presents the results of hemagglutination inhibition tests on sera from teenage individuals who received a standard dose of the current polyvalent influenza vaccine. Antigens used are B/Great Lakes/1739/54 (vaccine strain), B/Maryland/1/59 (similar or identical to strain isolated during 1961-62 season), and the B/Taiwan/2/62 strain. These tests show that while production of antibody against the Taiwan virus is stimulated by vaccination, the amount is considerably less, and the antigenic dissimilarity is again quite evident.

No further outbreaks of type B influenza have been reported since the one from which these viruses were recovered. It is requested that any virus suspected of being influenza which is isolated, and offers any problem in characterization, be sent as soon as possible to the International Influenza Center for the Americas.

LABORATORY REPORT (continued)

Table 6*

Complement Fixation Test Titers With Type Specific Guinea Pig Antisera

<u>Antigens</u>	<u>Antisera</u>	
	<u>Influenza A</u>	<u>Influenza B</u>
B/TW/1/62	<10	80
B/TW/2/62	<10	120
B/TW/3/62	<10	120
B/TW/4/62	<10	120
B/Lee/40	<10	60
A/PR8/34	320	<10

*H. G. Pereira, February 1962

Table 7*

Hemagglutination Inhibition Titers With Ferret Antisera
Treated by Cholera Filtrate

<u>Antigens</u>	<u>Antisera</u>					
	Strain	B/Lee	B/Eng/9/54	B/Joh/33/58	B/TW/1/62	B/TW/2/62
B/Lee/40		5120	<10	<10	<10	<10
B/England/9/54		<10	120	15	<10	<10
B/Johannesburg/33/58		15	<40	960	15	30
B/TW/1/62		<10	<10	15	480	480
B/TW/2/62		<10	<10	<10	240	300
B/TW/3/62		<10	<10	<10	240	480
B/TW/4/62		<10	<10	<10	300	800

* H.G. Pereira, February 1962

LABORATORY REPORT (continued)

Table 8

Response to polyvalent influenza vaccine as measured by the hemagglutination inhibition titers

Sera	Antigens		
	B/GL/1739/54	B/Maryland/1/59	B/Taiwan/2/62
Subject No.			
703 pre	80	160	20
703 post	160	160	20
705 pre	10	40	<10
705 post	80	320	40
710 pre	10	40	<10
710 post	80	320	20
715 pre	20	40	10
715 post	80	160	20
722 pre	20	80	<10
722 post	80	320	20
750 pre	40	40	<10
750 post	160	160	10
807 pre	40	40	<10
807 post	320	160	20

IV. WEEKLY PNEUMONIA AND INFLUENZA DEATHS

Pneumonia-influenza mortality - during the week ending March 2 excess pneumonia-influenza rose to a high peak, probably the crest of the 1963 wave. In this week 511 excess deaths were reported by the 108 cities, twice the number of the preceding week but including some reports delayed by the February 22 holiday.

Excess mortality was high in all divisions but the Mountain and Pacific. In this season excess mortality has not been recorded for the Pacific States and in only minor degree from the Mountain States.

Marked increases were reported from the North and South Central divisions and New England. High levels of excess mortality continued in the Middle and South Atlantic States.

Cumulative excess pneumonia-influenza mortality since the week ending January 5 has now reached 1491 deaths. Corresponding numbers for the 1960 A₂ influenza epidemic and the 1962 influenza B epidemic were 3310 and 861 deaths, respectively.

Total deaths - there were 14,930 deaths from all causes reported during the week ending March 2, an excess of 2889 above the expected number for this season. As shown in the table and chart 6031 excess deaths were recorded during the last four-week period. Since the week ending January 5, excess deaths from all causes have reached a total of 9763. During comparable periods of the 1960 and 1962 epidemics 11,443 and 4424 excess deaths, respectively, were recorded.

Total Deaths in 108 U.S. Cities

	Week Ending				4 Week Total	Weekly Average
	2-9	2-16	2-23	3-2		
Observed	13,554	13,112	12,755	14,930	54,351	13,588
Expected	12,122	12,091	12,066	12,041	48,320	12,080
Excess	1,432	1,021	689	2,889	6,031	1,508

WEEKLY PNEUMONIA AND INFLUENZA DEATHS

