

Occurrence of Influenza July 1954 to June 1955

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SPECIFICALLY diagnosed influenza has been reported to the Influenza Information Center of the World Health Organization Influenza Study Program in the United States since 1948. This information comes from investigators and diagnostic laboratories located in universities, hospitals, and Federal and State agencies, including Army, Navy, and Air Force installations. The weekly summaries of these reports and those received from other countries are published in the Communicable Disease Summary of the National Office of Vital Statistics, Public Health Service, and distributed to health officials and interested research workers in the United States and other countries. As part of the worldwide effort sponsored by the World Health Organization, this program seeks to improve the reporting of influenza and the exchange of newly isolated strains of influenza virus for investigational purposes. The present communication will consider the experience in the United States in the period July 1954 to June 1955.

During the previous winter season, 1953-54, influenza was almost totally absent from the

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United States and Western Europe. In the year before that, 1952-53, influenza A occurred in epidemic proportions in the United States, principally in the midwest and the south, with a small but noticeable concurrent increase in mortality rates. During the late winter of 1951-52, influenza B occurred widely in the United States in localized outbreaks with no appreciable fatality rate. In the season before that, 1950-51, there were epidemics of influenza A in the United States, particularly the north-eastern part, which had been preceded by sharp outbreaks in England and Western Europe.

Influenza was reported during the winter months of this last year, 1954-55, in scattered areas of the United States, particularly the eastern seaboard, and was almost exclusively due to type B virus. The first suggestion of influenza came from New York State during the third week of December, with an outbreak of influenza-like respiratory disease in a school. During the first part of January, high rates of absenteeism due to illness were noted in junior and senior high schools in Washington, Norfolk, Boston, and other cities of the eastern seaboard. The clinical features of the illness were of short duration and resembled influenza. Virus isolation and serologic studies later showed that many, if not the major proportion of cases, were due to influenza B.

The first reported isolation of influenza B virus in the country was from an unvaccinated patient at the Great Lakes Naval Training Station, Ill., whose onset occurred during the last week of December. This strain was antigenically similar to the strain recovered the previous year at the same installation. Influenza B continued during January in the eastern part of the country, and scattered reports of localized outbreaks were received from the midwest. In military installations, the rate of respiratory diseases remained relatively low, but cases of influenza, principally type B, were diagnosed serologically and by virus isolation at a number of posts throughout the United

Specimens for Influenza Diagnosis

The specific diagnosis of influenza type A, B, or C can be made only by laboratory examination.

The laboratories collaborating in the Influenza Study Program have facilities for specific diagnosis. Their locations may be obtained from State and Territorial health departments or from the Influenza Information Center, National Institutes of Health, Bethesda 14, Md.

The two most commonly used methods are specific isolation of the virus and demonstration of a rise in specific antibody by the hemagglutination inhibition test or the complement fixation test.

Samples for virus isolation should be obtained as early as possible in the acute phase of illness by collecting throat washings or throat swabs in a small amount of sterile bacteriological broth, skim milk, or serum-saline solution. These samples should be frozen at low temperatures unless taken to the laboratory within a few hours.

Two consecutive serum samples (drawn from a minimum of 5 cc. of blood) are necessary for serologic diagnosis. Single samples are of no value. The first sample should be taken as early as possible during the illness and the second about 14 days after onset. Separate serum is desirable. Clotted whole blood may be forwarded if time of transit is short, but it must not be frozen.

All such specimens should be sent to the nearest collaborating laboratory.

States. Influenza vaccine had been administered routinely to all military personnel early in the winter season.

In early February, reports continued of outbreaks, particularly among junior and senior high school students, and a number of colleges reported high incidence of respiratory illness, which later was shown to be due to influenza B virus. The disease was reported in Maine, Michigan, the southwestern States, California, and Oregon, and must be presumed to have occurred in many other States. In some areas such as Michigan, isolated cases of influenza B were diagnosed without the recognized occurrence of sharp outbreaks during this same period. Although in most areas of the country the incidence declined in the latter part of

February, cases continued to be diagnosed in some areas, including California, during March, April, and May.

For the first time in 2 years, influenza A virus was recovered from a patient in a New York State institution, with onset on March 1. Shortly thereafter, influenza A virus was also recovered in another institution in New York, and complement fixation tests on paired serums identified three other cases of influenza A in the same institution, having onsets in the middle of March. In April, additional cases of influenza A were diagnosed serologically in New York and California, and sporadically in military installations. No other isolations of influenza A virus were reported during the remainder of the July 1954-June 1955 period.

Influenza C was recognized serologically in areas where special effort was made to diagnose it, and one isolation was reported, but there was no evidence that it was a cause of epidemic respiratory disease.

Isolations of influenza virus and positive diagnostic serologic tests (any technique) reported by civilian and military laboratories participating, continental United States and Alaska

Month and year	Isolation of virus, type			Positive serologic tests, type		
	A	B	C	A	B	C
1954						
December.....	0	1	0	2	38	6
1955						
January.....	0	83	0	9	100	4
February.....	0	68	1	14	108	3
March.....	3	9	0	12	121	3
April.....	0	0	0	7	33	4
Total.....	3	161	1	44	400	20

The table shows a total of 629 reports of both virus isolations and serologic diagnoses of influenza from all the cooperating laboratories, including military laboratories, and gives a rough indication of the prevalence of the disease in the winter months. A total of 161 strains of influenza B, 3 strains of influenza A, and 1 strain of influenza C were isolated, and 400 positive diagnostic serologic tests for influenza B, 44 positive serologic tests for influenza

A, and 20 positive serologic tests for influenza C were reported.

Reports from the World Health Organization Headquarters, Geneva, the Canadian WHO Influenza Information Center, and from the World Influenza Center, London, indicated that influenza B began to occur sporadically in northern England and Wales in November and continued during December and January. In January, influenza B outbreaks were occurring in Canada, northern Holland, and later in the month, in Germany and Yugoslavia. As in the United States, the disease attacked principally school children. In February, WHO reports indicated continued outbreaks of influenza B in Europe, including Finland, and in different parts of Japan, particularly Tokyo. In March and April, influenza A infections were recognized serologically and by virus isolation in several widely separated areas of Great Britain, particularly southern Wales. It is of interest that the experience with influenza infections was similar in the United States, Canada, and Western Europe. Briefly, this was the occurrence of scattered outbreaks of influenza B, sometimes of considerable intensity, occurring chiefly among school children, beginning in the early winter and continuing

through February. In March, a few influenza A infections were recognized in both Great Britain and the United States, the first due to this type in 2 years.

Antigenic studies at several laboratories showed that the isolated strains of influenza B were similar to each other and very close to the B/GL/1/54 strain isolated in the Great Lakes Naval Training Station in March 1954. They differed somewhat from those isolated in 1950-52 and even more from the B/Lee strain of 1940. Preliminary antigenic analysis of the influenza A strains recovered in this country and Europe indicate general similarity to each other but also some variation from those recovered in previous years. Detailed studies are being undertaken to define more precisely the antigenic patterns of these recently recovered strains in the expectation that they may be important during the coming year.

Data collected by the National Office of Vital Statistics reveal that the number of deaths ascribed to influenza and pneumonia increased moderately in February, but most of this may be regarded as the usual seasonal increase in deaths from respiratory disease. The total mortality rate during the winter months was not noticeably increased.

Veterinarians' Entrance Salaries Raised

All Federal agencies were authorized last month to increase the starting salaries of grade GS-7 professional veterinarians from \$4,930 to \$5,200 annually. Veterinarians already employed at this grade will receive a minimum of \$5,200 a year.

The United States Civil Service Commission acted under legislation authorizing Federal recruitment at above minimum rates for particular jobs in areas in which the Federal Government is at a competitive disadvantage with private industry. The action became effective October 23, 1955.

Study by the Civil Service Commission revealed that \$5,200 a year more nearly approximates the salaries offered by non-Federal employers at the entrance level than the starting salary authorized by the Commission last June.