State of Alaska Epidemiology **Bulletin**

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Influenza Arrives in Alaska

The first culture-confirmed influenza cases of the 1992-93 flu season have been reported.

On November 24, 1992, a 24-year-old patient presented to a physician in Kodiak with fever, non-productive cough, myalgias, headache, and a clear nasal discharge. The physician sent a nasopharyngeal swab to the State Public Health Laboratory in Fairbanks where influenza A/Beijing/353/89-like (H3N2), a vaccine strain, was identified.

Through January 27, 1993, 16 other influenza isolates have been detected in four communities: five in Juneau (all influenza B), six in Fairbanks (all influenza B), four in Anchorage (three influenza B and one influenza A), and one in Gakona (influenza B). Six of these isolates have been characterized and all are vaccine strains. In addition, illness compatible with influenza has been reported from several Southeast Alaska communities as well as the North Slope. During the past 2 weeks, four elementary schools in Ketchikan, and one each in Anchorage, Barrow, and Petersburg reported peak school absenteeism rates of 25%, 15%, 42%, and 31%, respectively. The average absenteeism rate for these schools during the fall ranged from 3-9%.

Influenza is characterized by an incubation period of 1-2 days followed by the abrupt onset of fever up to 104° F, myalgia, headache, malaise, and anorexia. These symptoms usually last 3 days but can persist for as long as 8 days. Respiratory symptoms, such as cough and rhinorrhea, may occur and can last for more than 2 weeks.

Complications include primary influenza viral pneumonia and secondary bacterial pneumonia. Primary viral pneumonia occurs mainly among people with cardiovascular disease and is associated with rapid progression, bilateral infiltrates without consolidation on chest roentgenography, and high mortality. Secondary bacterial pneumonia occurs mainly in the elderly and people with underlying pulmonary disease and is associated with consolidation on chest roentgenography, positive sputum bacteriology, and low mortality.

The average estimated infection rate with influenza is 10-20% per year; during pandemics it can reach greater than 50%. Children 5-14 years have the highest attack rates; children under 5 and adults older than 55 years of age have the lowest attack rates but the highest rates of complications.

Influenza causes an average of 20,000 excess deaths each year and during the last major epidemic (1984-85) accounted for 57,400 excess deaths. In moderate epidemics, up to 1% of persons infected with influenza are hospitalized, costing more than $300 million.

INFLUENZA VACCINE

Vaccine should be directed primarily toward people older than 65 years of age and those debilitated by chronic cardiac, pulmonary, renal, or metabolic disease, anemia or immunosuppression. Vaccine is 60-90% effective in preventing infection in healthy young adults when vaccine strains are well matched to circulating strains. In the elderly and those with chronic diseases, however, effectiveness may be as low as 20-40%. In these latter two populations, vaccine is more effective in reducing complications, including hospitalization by 50%, pneumonia by 60%, and death by 80%.

The delayed appearance of the first influenza isolate during this flu season predicts that the illness peak may not occur until March. Because of this, vaccine should be offered to unimmunized persons at high risk of complications as late as April.

INFLUENZA SURVEILLANCE

The Section of Epidemiology strongly encourages physicians to participate in influenza surveillance. Successful isolation of influenza virus is increased by the collection of nasal washes or nasopharyngeal swabs from patients 1-3 days after the onset of symptoms. Culture materials and viral testing are available free-of-charge. Culture materials may be obtained from any of the three State Public Health Laboratories located in Juneau, Fairbanks, and Anchorage; testing is performed in Fairbanks. Unusual occurrences of influenza-like illness, particularly illness outbreaks among vulnerable people such as nursing home residents or hospital patients, should be reported to the Section of Epidemiology.

(Contributed by Bradford Gessner, M.D., Section of Epidemiology)