



Department of Health and Social Services  
Joel Gilbertson, Commissioner

Division of Public Health  
Doug Bruce, Director

Section of Epidemiology  
John Middaugh, MD, Editor

3601 C Street, Suite 540, PO Box 240249, Anchorage, Alaska 99524-0249 (907) 269-8000  
24-Hour Emergency Number 1-800-478-0084

<http://www.akepi.org>

Bulletin No. 23 August 27, 2003

## Summer Influenza in Alaska 2003

### Background

During the summers of 1998 and 1999, large outbreaks of influenza A occurred in Alaska and the Yukon Territory.<sup>1-4</sup> The majority of cases were tourists traveling with groups of 50-60 people by bus, train, and cruise ship. In addition, five percent of 1998 influenza-like illness (ILI) cases were Alaska residents and 21% of laboratory confirmed cases were Alaskans in 1999.

Following the outbreaks in 1998 and 1999, the Alaska Division of Public Health implemented year-round influenza surveillance; only sporadic activity was noted over the next three summers.

- In 2000, the Alaska State Virology Laboratory (ASVL) reported one influenza A (H1N1) in May, and one influenza B in June.
- In 2001, the ASVL reported one influenza B in May, and one influenza A (H3N2) in June.
- In 2002, the ASVL reported 33 isolates of influenza B in May, but no additional cases were detected throughout the rest of the summer.

### 2003 summer influenza in Alaska

**Cruise ships:** In early June 2003, the Alaska Section of Epidemiology received reports of two separate clusters of ILI in cruise ship travelers who became ill after their visit to Alaska. The first cluster, four people from Michigan, was never laboratory confirmed. The second report involved 11 travelers on a different cruise ship; all were rapid antigen test positive for influenza (A/B combined test). Most individuals in these two events had received the 2002-2003 influenza vaccine.

To increase surveillance for influenza in Alaska, the ASVL provided viral transport media (VTM) and influenza specimen collection supplies to the two affected cruise ships. VTM was also sent to key clinics, emergency departments and public health centers along popular tourist corridors. No additional ILI has been detected on cruise ships, to date.

**Community-based:** During the second week in July, a physician in Ketchikan reported seven children with positive rapid antigen tests for influenza. Over the next 4 weeks, 16 additional cases of laboratory-confirmed influenza A (H3) were reported from three Alaska communities (Table). Nineteen of 23 individuals were diagnosed through rapid influenza A/B antigen testing; six of 19 were also culture positive. Four of 23 cases were diagnosed by a positive viral culture, two that had a negative rapid antigen test. Ketchikan reported the heaviest activity. **All cases were unrelated to tourism or cruise ship outbreaks.**

**Table: Laboratory-confirmed influenza A (H3) reported July 1 – August 7, 2003 in Alaska**

Community	Lab-confirmed (rapid test/culture)	Age	Comments
Ketchikan	21 (19/8)	<1 - 61 years (median 17 yr)	Coast Guard (2) Alaska Ferry worker (1)
Unalaska	1 (0/1)	Infant	
Fairbanks	1 (0/1)	Adult	

All influenza A (H3) isolates were sent to the WHO/CDC reference laboratory for further characterization. To date, five isolates have been characterized; three were A/Panama (H3N2) and two were a closely related strain, A/Korea (H3N2). Influenza A/Panama was the H3N2 strain circulating last winter and was included in the 2002-2003 influenza vaccine.

### Discussion

Although the traditional influenza season begins in October and ends in May, increasingly Alaska has experienced outbreaks of influenza during summer months. Influenza outbreaks among Alaska travelers and cruise ships have been well described. Summer surveillance shows that influenza can also occur in Alaska communities unrelated to outbreaks among tourists. As patterns of influenza activity shift, this diagnosis must now be considered year-round in Alaska. This changing epidemiologic trend may be due to several factors:

- Increased clinician awareness of influenza as a year-round disease.
- Improved laboratory capacity for rapid antigen testing and viral cultures.
- Increased global travel by Alaskans, business travelers and tourists to and from regions with influenza activity in late spring and summer (e.g. end-of-season influenza in the Northern Hemisphere; normal influenza season in the Southern Hemisphere).
- Travel where large groups of individuals from all over the world travel together in enclosed spaces (buses, trains, and cruise ships).
- Challenges to influenza prevention:
  - Waning immunity of individuals vaccinated the previous fall;
  - Unavailability of influenza vaccine during summer months;
  - Possible introduction of a new antigenic influenza variant, rendering the previous year's vaccine ineffective.

### Recommendations

1. If you are seeing ILI\* in your practice, please call the Section of Epidemiology at 907-269-8000 (usual business hours) or 1-800-478-0084 (after hours).
2. To obtain viral transport media, contact the Alaska Virology Laboratory-Fairbanks at 907-474-7017 or the Alaska State Public Health Laboratories-Anchorage at 907-334-2100.
3. You can obtain additional information about influenza at the U.S. Centers for Disease Control and Prevention Internet site at <http://www.cdc.gov/ncidod/diseases/flu/fluivirus.htm>.

### References:

1. Section of Epidemiology. Summer influenza A hits Alaska. *Epidemiology Bulletin* No. 13, August 11, 1998. [http://www.akepi.org/bulletins/docs/b1998\\_13.htm](http://www.akepi.org/bulletins/docs/b1998_13.htm)
2. Uyeki TM, Zane SB, Bodnar UR, et al. Large summertime influenza A outbreak among tourists in Alaska and the Yukon Territory. *Clin Infect Dis* 2003;36:1095-102.
3. Section of Epidemiology. Influenza A among Summer Tourists in Alaska – 1999. *Epidemiology Bulletin* No. 9, July 2, 1999. [http://www.akepi.org/bulletins/docs/b1999\\_09.htm](http://www.akepi.org/bulletins/docs/b1999_09.htm)
4. Section of Epidemiology. Influenza A among Summer Tourists in Alaska – 1999: Final Report. *Epidemiology Bulletin* No. 19, December 16, 1999. [http://www.akepi.org/bulletins/docs/b1999\\_19.htm](http://www.akepi.org/bulletins/docs/b1999_19.htm)

\*ILI signs and symptoms include abrupt onset of some or all of the following: fever, myalgias, headache, severe malaise, nonproductive cough, sore throat, and rhinitis. Children may also present with otitis media, nausea and vomiting.