



Bulletin No. 18
November 2, 1984
Epidemiology of Hepatitis A in Alaska

Hepatitis A is thought to be caused by a virus transmitted principally by the fecal-oral route under conditions of poor sanitation and close contact with infected persons. Characteristically, the illness produced is of abrupt onset, with fever, malaise, anorexia, nausea, abdominal discomfort, and jaundice. Morbidity is variable and mortality usually low (less than 1%). The usual incubation period of hepatitis A is 15 to 50 days (average 25-30 days). Stools from patients with hepatitis A have been shown to be infective as long as 2-3 weeks before and 2 weeks after the onset of jaundice. Both foodborne and waterborne outbreaks of hepatitis A occur with some regularity.

Hepatitis A has caused cyclical epidemics in Alaska for decades. After an outbreak sweeps through a community, only sporadic cases occur for many years until the number of new susceptible builds up to a level that can again sustain epidemic transmission.

From 1972-1978 more than 3,241 cases of hepatitis A were reported to the Epidemiology Office, Division of Public Health, State of Alaska (Table 1). This last major outbreak of hepatitis A apparently began in Barrow and other North Slope Borough villages in 1972. During the following five years, disease spread throughout rural Alaska, involving almost all communities and eventually spreading to urban areas as well. In 1976-1977, most cases occurred in the Yukon-Kuskokwim Delta area where more than 1,500 cases were identified among the 15,000 residents. The outbreak involved primarily children; 88% of the cases occurred among those less than 15 years of age. While most cases were mild or asymptomatic, during 1976-1977, four deaths from fulminant hepatic failure occurred - two among children and two among young adults.

Earlier this year, an outbreak of hepatitis A occurred in Manokotak (Epidemiology Bulletin No. 8, Week Ending April 6, 1984). During investigation of this hepatitis A outbreak, blood testing revealed that all Manokotak residents less than 20 years of age were susceptible to hepatitis A, while those older than 20 years of age had immunity indicative of past infection. Stringent control measures implemented in Manokotak appear to have controlled the outbreak.

Because of our concern that hepatitis A might be starting to spread in rural Alaska, we tested sera collected as part of the Hepatitis B Control Program for hepatitis A antibody. Nine villages were screened (Figure 1). High levels of immunity to hepatitis A were found among those in the 20-29 age group and older. However, most individuals less than 20-29 years of age were susceptible to hepatitis A. Based on our knowledge of the infectivity of hepatitis A, its method of transmission by the fecal-oral route, the absence of adequate water and sewer disposal in many villages, and the growing number of susceptible individuals in rural Alaska, it is likely that hepatitis A will spread among rural Alaskans in the future.

There are several circumstances that give us hope that we may be better equipped in the future to control hepatitis A. Hopefully, it will be several years before the next wave of hepatitis A begins. Past outbreaks took several years to spread, and children were the ones primarily infected. Extensive research is now underway to develop a new, effective vaccine against hepatitis A. When the vaccine becomes available, its use may prevent the next outbreak of hepatitis A in Alaska.

We would like to encourage reporting of all cases of hepatitis so that we can maintain surveillance and initiate available control measures promptly when cases occur. We urge those involved in patient care to use specific serologic tests for the diagnosis of hepatitis A, Hepatitis B, and non-A non B hepatitis and to report all acute cases through the Rapid Telephonic Reporting System - 561-4234 (Anchorage area), toll-free Zenith 1700.

**Table 1. Reported Cases of Hepatitis A
Alaska 1969-1980**

Year	Number of Cases
1969	74
1970	140
1971	121
1972	200
1973	249
1974	282
1975	414
1976	1398
1977	568
1978	130
1979	63
1980	27
1981	45
1982	20
1983	52

Age Specific Distribution of Hepatitis-A IgG Antibody
Nine Villages 1984
(Total Screened = 1566)

