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Hepatitis A in a Food Handler—Kodiak, AK Interim Report

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Background

On February 18, 2003, a food handler (Patient A) who was routinely involved in the glazing and garnishing of doughnuts and preparation of cold sandwiches at Deli A in Kodiak, had onset of nausea, vomiting, and diarrhea. Patient A stayed home from work that day, but continued to work for four of the next five days. On February 23, she noticed that her urine was dark. On February 24, she sought medical attention and was jaundiced. An IgM anti-hepatitis A virus (HAV) and liver function tests were drawn that day. Her liver enzymes were markedly elevated, and on February 26, the serologic test for HAV was positive. That day, Patient A's physician assistant, Greg Metes, reported this result to the Section of Epidemiology.

Investigation

- On February 27, Dr. Joe McLaughlin and nurse Ann Marie Bailey flew to Kodiak to perform an investigation of contacts to Patient A and to determine the risk of hepatitis A virus exposure to the greater community.
- The Alaska Department of Environmental Conservation (DEC) was notified; sanitarian Mike Gardner flew to Kodiak and performed a detailed inspection of Deli A on February 27. The deli is within a supermarket. There are a total of 29 employees of the supermarket; of these, 5 (including Patient A) are involved with food preparation at Deli A.
- An extensive interview with Patient A did not identify any significant risk factors or potential exposures to hepatitis A during the interval from 3-5 weeks prior to illness onset.
- Patient A's work schedule for the week prior to her developing jaundice was obtained (Table 1). During the period she was infectious, Patient A was involved with doughnut and sandwich preparation. She did not wear gloves during doughnut preparation but did glove for sandwich preparation. She described adequate hand washing practices during food preparation.
- Patient A's household contacts and Deli A coworkers were all interviewed about symptoms for hepatitis A and each had blood drawn for liver function and IgM anti-HAV testing. Two coworkers of Patient A had symptoms of nausea, vomiting, and diarrhea within the past week; however, neither had abnormal liver transaminase tests. Patient A's liver function tests are show in Table 2.

- Eighteen of 23 additional coworkers at the supermarket associated with Deli A were not involved with deli food preparation but were also interviewed about symptoms of HAV; all have been asymptomatic.
- On February 27, Kodiak public health nurses and Epidemiology staff administered immune globulin (IG) to all seven direct household contacts and 24 of 29 coworkers of Patient A. Eleven doses of hepatitis A vaccine were also administered to coworkers.
- Epidemiology held a conference call with the Kodiak Public Health Center and DEC to review the investigation to date. Because donuts could have been contaminated from February 16 through February 26, the team recommended IG prophylaxis for Deli A patrons who consumed donuts during this time period.

Table 1.

	2/16	2/17	2/18	2/19	2/20	2/21	2/22	2/23	2/24	2/25
Worked	Yes	Yes	No	Yes	No	Yes	Yes	Yes*	No	Yes**

*Patient A's first signs of jaundice were present on this date.

**Patient A worked only for one hour in the morning making doughnuts and was then sent home.

Table 2.

	Patient A	Normal Range
Total Bilirubin	12.4	0.0-1.2 mg/dl
Conjugated Bilirubin	10.4	0.0-0.3 mg/dl
Alkaline Phosphatase	170	50-136 u/L
AST (SGOT)	1049	15-37 u/L
ALT (SGPT)	2909	30-65 u/L

Conclusions

- An ungloved food handler was acutely ill with HAV infection while glazing and garnishing doughnuts in a Kodiak deli during the week prior to her developing jaundice.
- Patrons of Deli A who consumed doughnuts from February 16-26 are at potential risk of HAV infection.
- Administration of immune globulin to exposed patrons could prevent illness.

Actions

1. In cooperation with Deli A management, DEC, and Kodiak Public Health staff, a press release was distributed by Alaska Division of Public Health on February 28, alerting Deli A patrons who consumed doughnuts at any time from February 16-26 that they can receive free IG prophylaxis at the Kodiak Public Health Center from February 28-March 2.
2. Hepatitis A vaccine will be offered to all coworkers and household contacts of Patient A who have not been previously immunized against hepatitis A or have not been ill with HAV in the past.

3. A public health notice was distributed to Kodiak health care providers on February 28, alerting them of the investigation and the plan to provide prophylaxis to Deli A patrons who consumed donuts from the Deli A bakery. In addition, they have been asked to be watchful for patients who have signs and symptoms compatible with HAV infection.

Recommendations

1. Immune globulin (IG) is recommended for all persons who ate donuts that were made at the AC Deli in Kodiak from February 16 through 26.
2. People who ate foods *other* than donuts or who shopped at the AC deli are not at increased risk for contracting hepatitis A and *do not need IG*.
3. Immune globulin will be provided by the Alaska Division of Public Health at the Kodiak Public Health Center, 316 Mission Road, Room 207, Kodiak, Alaska.

Clinics will be held:	Friday, February 28	7 AM – 9 PM
	Saturday, March 1	9 AM – 7 PM
	Sunday, March 2	10 AM – 3 PM

4. All employees at the AC Deli should receive IG and hepatitis A vaccine.
5. All suspected cases of hepatitis A should be reported immediately to the Section of Epidemiology to facilitate prompt investigation and appropriate prophylaxis. The diagnosis is confirmed by a positive serology for anti-HAV IgM. The Section of Epidemiology can facilitate transport of serum specimens to the State of Alaska Public Health Laboratory-Fairbanks for rapid test results. **To report, call 907-269-8000 during business hours or 800-478-0084 after hours.**