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## Giardia Outbreak in a Day Care Nursery - Juneau

This non-profit day care nursery, situated in an old building in downtown Juneau, cares for about thirty children, both infants and toddlers. A sister day care center cares for children over two-and-a-half years of age (requiring toilet training), while the nursery accepts children three years old and under who are not yet toilet trained.

For the past five years, there have been annual outbreaks of Giardiasis in this nursery. Morbidity has been documented among children and their family members. Although numerous control measures were recommended in past years, they were poorly implemented; outbreaks continued to occur. As a result of this year's investigation voluntary closure of the nursery was recommended and the nursery was temporarily closed. Once factors contributing to the recurrent outbreaks were assessed and stringent control measures put in place, the nursery reopened but restricted services offered to children under 16 months of age.

In late August, five cases of giardiasis were identified when a nursery employee submitted stool samples from children with chronic diarrhea to the Southeastern Regional Laboratory, Division of Public Health. As part of the epidemiologic investigation, the Juneau Health Center, in cooperation with the nursery, discovered an additional eight cases of giardiasis from the total nursery population of twenty-four. Nine of ten (90%) infants less than 16 months old were affected; and four of twenty-four (17%) toddlers (16 months through three years). Two cases of giardia were identified among siblings of positive children. Both had attended the nursery during July and were enrolled in the day care.

A questionnaire was administered to the parents of all nursery children. Results showed that 52% of all children positive for giardia had suffered foamy diarrhea for greater than one week during the summer, with bloating and loss of appetite in half of them. Of children found to be positive for giardia, 48% had been asymptomatic. Four children found to have negative stools in late August had symptoms of giardia at some time during the summer. An extensive sanitation inspection and review conducted by the Division of Public Health uncovered numerous deficiencies.

After the epidemiologic investigation was underway, the center was closed for two-and-a-half weeks to permit extensive remodeling and environmental cleaning. When re-opened, only children with two successive negative stools, either without or after treatment, were readmitted. The infant program has been gradually phased out and a strict policy of stool testing in the event of diarrheal illness has been enforced. Critical to control of the outbreak has been the insistence on:

1. Prompt reporting of illness to the Juneau Health Center,
2. Institution of a policy to prohibit the center from accepting for care children who are ill,
3. Extensive case finding, treatment, and follow-up among children attending the center and their families,
4. Institution of strict handwashing procedures among staff.

The exclusion policy carried the risk that children excluded with giardia would be placed in another nursery where they would continue to transmit disease. The Juneau Health Center, accordingly, was involved in the follow-up of all children with giardia. The cooperation of many groups, especially the daycare staff and public health nurses, was critical to control the outbreak and prevent future recurrences.

The Epidemiology Office urges the prompt reporting by physicians and other health care providers of all cases of enteric disease on the Rapid Telephonic Reporting System (RTR) (279-5535 in Anchorage or ZENITH 1700). Early and complete reporting can allow detection of common source outbreaks before epidemic proportions are reached. Further, we urge physicians and other health care providers, day care centers, and nurseries to call Dr. Tom Kosatsky (272-7534) to assist with epidemiologic investigation and implementation of control measures when disease outbreaks are suspected.

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