



Bulletin No. 19

August 8, 2002

### Norwalk-Like Virus Continues to Torment Tourists

In June 2002, the Section of Epidemiology alerted Alaska health care providers about an outbreak of Norwalk-like virus (NLV) onboard a cruise ship that traveled to Alaska.<sup>1</sup> As a result, the Department of Environmental Conservation (DEC) notified tour operators in Alaska of the outbreak and made recommendations for meticulous sanitation and hand-washing procedures. Since that time, surveillance in Alaska among land-based tour groups has not shown increased numbers of gastroenteritis among passengers or crew.

However on July 31, the Centers for Disease Control and Prevention (CDC) Vessel Sanitation Program notified the Section of Epidemiology that outbreaks of NLV had occurred on cruise ships sailing from Vancouver in July and in land-based youth camps in British Columbia. Recently a new outbreak of NLV was identified aboard a cruise ship arriving in Vancouver after sailing in SE Alaska waters. The tour company, in consultation with CDC, cancelled its next scheduled cruise so the vessel could be thoroughly cleaned and disinfected.

On August 1, we received a report of ill passengers on a cruise ship that operates only in Alaska waters. Subsequently we received reports of ill passengers aboard cruise ships belonging to two additional cruise line companies. As a result of these new disease reports, the CDC Vessel Sanitation Program, DEC, Health Canada and Section of Epidemiology developed new recommendations for cruise lines to prevent NLV outbreaks aboard vessels. The new recommendations address stringent protocols for handling of ill crew, food preparation, passenger advisories, active surveillance for ill crew and passengers, hand-washing, and disinfection procedures.

Copies of these recommendations as well as a passenger health information sheet are available at <http://www.state.ak.us/dec/deh/sanitat/homesan.htm> and <http://www.epi.hss.state.ak.us>. An update on NLV aboard cruise ships is available at <http://www.cdc.gov/nceh/vsp>.

#### Discussion

Nationwide outbreaks of NLV are occurring with increasing frequency in large group settings such as day camps, military bases and cruise ships.<sup>2</sup> Transmission of NLV in these settings is facilitated by 1) high attack rates, 2) low infectious dose, 3) absence of lasting immunity, 4) environmental stability of the organism and 5) potential for multiple modes of transmission.<sup>2</sup> Containment of an outbreak requires cooperation by ill staff to report their illness and not to work while ill and for ill passengers to self-quarantine for at least 72 hours. Meticulous attention must be given to frequent and vigorous hand-washing and aggressive cleaning of contaminated areas. During outbreak situations, chlorine must be used at increased concentrations (at least 1000 ppm) and for an extended contact period (several minutes). Other disinfectants used in routine situations do not work on NLVs.

#### Recommendations

1. When NLV illness is suspected in a crew member (nausea, vomiting, diarrhea), he must stop work. Ill crew must be well for 72 hours prior to return to duty. A designated person should question all ill crew about duration of illness and length of period after recovery prior to their return to work.
2. All food handlers must follow meticulous hand-washing procedures and must wear gloves when handling ready-to-eat foods. Ill crew should not prepare, handle or serve any food, ice or beverages.
3. Crew members should not switch between vessels or work sites unless they have been completely free of symptoms for at least 10 days.
4. Passenger health information should be distributed to all passengers notifying them of the occurrence and symptoms of NLV. Ill passengers should be instructed to report signs and symptoms to a designated crew member so that they may receive instructions about preventing spread of NLV.
5. All passengers and staff should meticulously wash their hands. Adequate facilities and supplies should be available for all crew and passengers. Hand-washing procedures should be posted in bathrooms. Whenever possible, passengers should use toilet facilities in their assigned quarters.
6. Hard surfaces that are touched by humans, including foot traffic areas (such as counter tops, bathroom surfaces, doorknobs, handrails, telephones, and floors) should be aggressively cleaned and then disinfected using chlorine bleach at a concentration 1000 ppm (1/2 cup/gallon). Chlorine bleach at a concentration of 5000 ppm (2 1/2 cups/gallon) should be used for areas suspected of direct NLV contamination, e.g., where vomitus has occurred. Crew should wear gloves when cleaning up vomitus.
7. Laundry should be washed using water at 160°F and chlorine bleach used in the rinse. All soiled linens and garbage should be handled with gloves. Ice buckets and garbage cans should be disinfected with chlorine bleach after each cruise.
8. Cruise companies operating in international or interstate waters must notify CDC Vessel Sanitation Program (1-800-323-2132) when 3% or more of passengers or crew are ill with vomiting or diarrhea. Tour companies operating wholly within Alaska (land-based or intrastate waters) or health care providers seeing an unusual number of tourists or tourism industry employees ill with vomiting or diarrhea should notify the Alaska Section of Epidemiology (907-269-8000 during business hours or 1-800-478-0084 after hours) as soon as possible.

1. Bernth, G., et al. Norwalk-like Viral Illness Hits Alaska Travelers Early. *Epidemiology Bulletin* No. 12, June 7, 2002.
2. Norwalk-like Virus-Associated Gastroenteritis in a Large, High-Density Encampment--Virginia, July 2001. *MMWR*, August 2, 2002, 51(30); 661-663.

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