Shiga Toxin-producing E. coli O26 in a Daycare

Linda Navarre, Kittitas County Public Health

Outbreak Summary:

Fifteen Kittitas County residents were infected with *E. coli* O26 between June and July of 2010. *E. coli* O26 is similar to the more prevalent *E. coli* O157:H7 as it is also a Shiga toxin-producing *E. coli* (STEC), which can cause hemolytic uremic syndrome. The cases ranged in age from 23 months to 7 years (66.6 % < 3 years), 11/15 (73.3%) were symptomatic, and one child was hospitalized. 14 of 15 children attended three child care facilities, which were temporarily closed by the Kittitas County Public Health Department (KCPHD) Health Officer to contain the outbreak. 151 of 214 (70.6%) people screened by KCPHD staff submitted stool samples for testing at the Washington State Public Health Laboratories (WAPHL). 9.9% (15/151) of tested individuals in this outbreak were shedding *E. coli* O26.

Health care providers were alerted to the outbreak via fax alerts and for those with the NextGen Electronic Health Record software, a public health "flag" was placed in the client's electronic medical record. Appropriate hand hygiene helped to stop the spread of the disease between individuals. All three child care facilities were reopened after meeting Department of Early Learning requirements which were disinfection of the facilities observed through a site inspection and demonstration of an adequate number of staff meeting KCPHD's screening requirements. Children were allowed to reenter the child care facilities after receiving clearance

from KCPHD with confirmation of two negative stool samples. Education was the emphasis for follow up activities with the child care staff. Child care facilities received follow up support in the form of additional on-site inspections and a check box tool to facilitate assessment of hand washing compliance as children enter the child care facilities. (WAC 170-295-3040(1) requires children to wash their hands with soap and warm water on arrival at their centers.)

What worked well:

- The closure of the child care facilities with a health order and immediate distribution of hand hygiene education allowed for an aggressive containment of the outbreak.
- Local media provided accurate messaging to the community.
- Health care provider updates increased awareness of the outbreak and child care testing and screening requirements.
- A community forum was held to provide education and emotional support to parents and child care staff.
- Daily transport of samples via car to WAPHL during the critical period was efficient and enabled rapid evaluation of the spread of disease and validity of receipt of samples, and emphasized to parents KCPHD's willingness to go above and beyond normal processes.
- Follow up mailing via FedEx was expensive but again expedited sample results.
- Distributing reentry forms ("golden tickets") to clients who met screening requirements provided functional communication tools between KCPHD and child care centers.

Lessons learned:

- Twice daily briefings are necessary after receipt of specimen results.
- Communication can be increased by use of a communication board with designated tasks.
- Health Orders should be delivered in person by a minimum of two staff members for information distribution and client screening, if possible.
- Communications with a local lab are necessary to arrange sample kit distribution and sample drop off during evening and weekend hours.
- Specimen submittal forms require highlighting of required fields with a warning of sample rejection if the submittal form is not completed properly.