

**Investigation Number 2013-3075
Summary**

800 NE Oregon St., Ste. 772
Portland, OR 97232
Voice 971-673-1111
FAX 971-673-1100
Oregon.ESSENCE@state.or.us

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Summary of outbreak 2013-3075

Background:

On December 18, Multnomah County Health Department was called by an employee at the DoubleTree Hotel, Lloyd Center to report gastrointestinal illness among attendees of a holiday luncheon held by Norris & Stevens, a property management company based in Portland, Oregon on December 13, 2013. Approximately 380 employees and guests attended the event. Appetizers were served at 11:00 a.m. followed by a lunch buffet at noon. Residents were from multiple Oregon counties as well as Washington State. A conference call was arranged, and roles and responsibilities outlined.

Methods:

Names and phone numbers for party attendees were provided by Norris & Stevens using their RSVP list. On December 19 we received a partial list of employee work phone numbers which was updated by the company during the investigation. Using this list, OPHD and Multnomah, Washington, Marion, and Linn county health departments interviewed Norris & Stevens employees using a standardized questionnaire. We attempted to contact all employee attendees for whom a work phone number was available to us as of the morning of December 19. Family members, guests, and other employees who attended the gathering were also interviewed if contact information was provided by other interviewees.

We received information from the DoubleTree listing food preparers and banquet serving staff who worked in association with the Norris & Stevens holiday party. DoubleTree employees were contacted and asked about symptoms, food exposures from the banquet, and duties during the event.

Cases were defined as people with a history of vomiting or 3 or more loose stools within a 24-hour period within 72 hours following the December 13 event. Individuals with GI illness were asked to submit stool specimens for confirmation. Ill persons were educated on proper hand hygiene and best practices to prevent spread of infection.

Multnomah County Environmental Health and OPHD epidemiologists inspected the hotel on December 19. The site visit included inspection of the banquet halls and kitchens, informal interviews of hotel staff, menu retrieval, a review of custodial cleaning products and procedures, and employee illness policy education.

We further assessed whether attendees of other events held at the DoubleTree during the same time period experienced elevated levels of gastroenteritis. If so, this might have suggested illness transmission related to contamination of food or other in-common exposures at the hotel. To do this, we contacted the event coordinators for other catered events held at the DoubleTree on December 12, 13, and 14, obtained contact information for a sample of attendees at these gatherings, and called or e-mailed them to determine if they had experienced gastroenteritis symptoms following their events.

Results:

In total 76/380 (20%) party attendees were interviewed. Among the 76 interviewed attendees, 43 met the case definition, 31 reported no illness, and 2 persons were excluded, one due to mild symptoms not meeting the case definition and the other because of symptom onset >72 hours from exposure. Attack rate was 58% (43/74). There were no common exposures other than the event itself. The demographic and clinical profile of the cases was unremarkable; please see the appendix for a summary of this information. .

Consumption of three food items was statistically associated with illness: pork loin (RR = 1.63, CI 1.1—2.43; P=0.0182), smoked salmon appetizers (RR = 1.55, CI 1.04—2.31; P=0.0352), and coffee (RR = 1.57, CI 1.12—2.21; P=0.0457). On interview, we also noted that several attendees became ill within 1-2 hours of the event, suggesting that they already had infection when they arrived. Another guest had symptom onset at 7:30 p.m. on December 13 and reported that a household contact was ill in the week leading up to the holiday party.

Sixteen DoubleTree employees, both kitchen staff and banquet staff, were interviewed. Five of 16 interviewed met the case definition; 4/5 had symptom onset on December 15, one had symptom onset December 14 at 22:00. All DoubleTree employees meeting the case definition were banquet staff; no kitchen staff reported illness. Many of the kitchen staff tasted food during meal preparation including the pork loin and smoked salmon appetizers. Four of six kitchen staff ate the salmon appetizer, 2/6 ate pork loin and 1/6 reported trying the pork loin gravy but not the pork loin.

Lab results from 8/10 party attendees confirmed Norovirus GII.4_Sydney. One DoubleTree employee submitted a stool sample which was also positive for Norovirus GII.4_Sydney.

Multnomah County's environmental health staff performed a review of operating procedures at the hotel on December 19. Review of HR records showed that no food preparers or banquet staff had been ill with gastrointestinal symptoms in the days leading up to the outbreak. No significant food code violations were identified.

Samples of attendees from seven of 25 catered events held at the Double Tree during December 12-14, 2013 were contacted. Based on this surveillance, none of the sampled events had elevated levels of gastroenteritis. When contacted by Double Tree staff to notify him/her that OPHD might be calling, one event coordinator had mentioned hearing of several illnesses at the event he/she organized. OPHD obtained a guest list from the coordinator and contacted a sample of 19

people, about one-quarter of the total attendees. Two reported gastrointestinal illness and were from the same family. This rate of illness was consistent with the community's background rate of gastrointestinal symptoms due to sporadic illness; no further investigation was pursued.

Conclusion:

An outbreak of norovirus infection occurred subsequent to a holiday party held at the DoubleTree Hotel on December 13. Though foodborne transmission cannot be ruled out as the source of illness, after consideration of all the epidemiologic evidence, our inability to implicate a single food item, the presence of attendees who must have been incubating norovirus, and the lack of illness among other groups being served the same food items suggest that the source transmission may most likely have been one or more of the attendees. This may have occurred through person-to-person transmission, and may also have involved contamination of certain foods by ill attendees, given that consumption of several foods was significantly associated with illness. There were several additional outbreaks of norovirus reported in the community the same week as the Norris & Stevens party.

Inspection of the facility did not reveal any substandard practices, and, in fact, the DoubleTree Hotel provides employees paid sick leave. The hotel staff fully cooperated with the investigation, and actively participated by obtaining and sharing lists of additional events and party attendees. Proper hand hygiene techniques and use of cleaning products effective against norovirus were reviewed with the DoubleTree staff and management. It also seems reasonable to consider periodically rotating in clean serving utensils on buffet lines to decrease the likelihood that they could be vehicles for disease transmission if they become contaminated by ill diners.

Appendix

Norris & Stevens Holiday Party, Outbreak ID: 2013-3075

Table 1: Demographics for 43 cases

Sex	
- Male	58% (25/43)
- Female	40% (17/43)
Age group	
- <1 year old	2.3% (1/43)
- 1 – 4 years	4.6% (2/43)
- 5 – 9 years	0%
- 10 – 19 years	2.3% (1/43)
- 20 – 49 years	53.5% (23/43)
- 50 – 74 years	28% (12/43)
- 75+ years	2.3% (1/43)
- Age unavailable	7% (3/43)

Table 2: Symptoms and clinical outcomes for 43 cases

Any diarrhea	95% (41/43)
3 or more loose stools in a 24 hour period	95% (41/43)
Vomiting	60% (26/43)
Bloody Diarrhea	5% (2/43)
Abdominal cramping	84% (36/43)
Fever	44% (19/43)
Headache	47% (20/43)
Myalgia	58% (25/43)
Chills	60% (26/43)
Fatigue	84% (36/43)
Nausea	84% (36/43)
Missed work or school	34.9% (15/43)
Seen by a clinician	4.6% (2/43)
Visited an ED	0
Admitted to hospital	0

Median Duration of Vomiting/Diarrhea: 24 hours

Onset of any symptoms:

Earliest: 12/13/13 at 01:45

Median: 12/14/13 at 19:15

Latest: 12/16/13 at 02:00

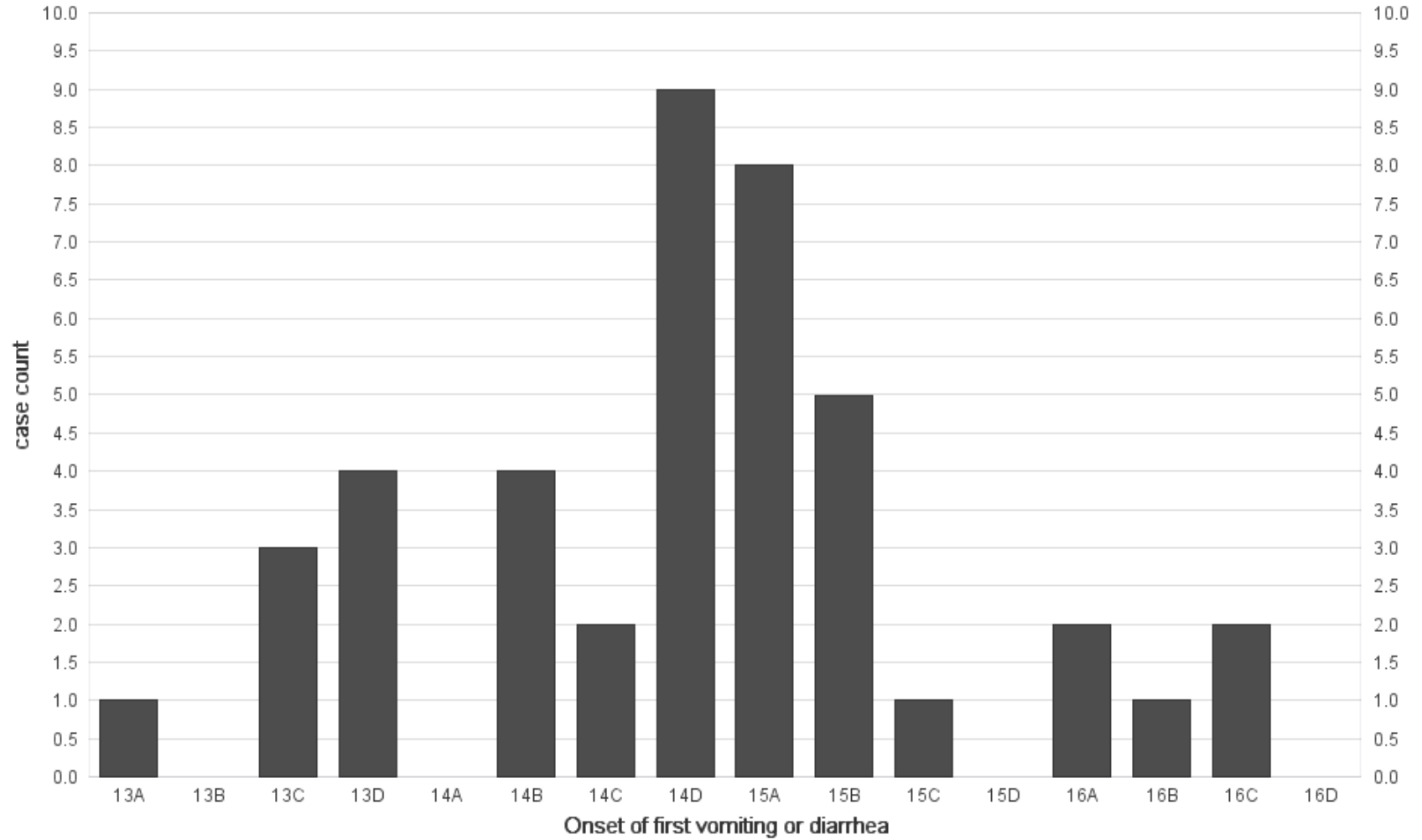
Onset of vomiting or diarrhea:

Earliest: 12/13/13 at 02:30

Median: 12/14/13 at 22:30

Latest: 12/16/13 at 15:00

Epidemic Curve, 2013-3075



Onsets from 12/13/2013–12/16/2013 in four 6-hour intervals per day.
A (0000–0559); B (0600–1159); C (1200–1759); D (1800–2359)

N = 42