

**Outbreak of Norovirus Associated with the Midwest Shabbaton — Douglas County,
February 2016**



Background

On February 29, 2016 at 9:30 a.m., the Kansas Department of Health and Environment's Infectious Disease Epidemiology and Response section (KDHE) was notified by a citizen that up to 20 individuals were experiencing gastrointestinal symptoms after attending the Midwest Shabbaton events from February 26-28, 2016 in Lawrence, Kansas. The Chabad on Campus hosted groups from Kansas, Illinois, Minnesota, Missouri, Indiana, Nebraska, and Wisconsin. The Midwest Shabbaton included five events where food was provided. The Lawrence-Douglas County Health Department (LDCHD) was notified on February 29, 2016, and, in conjunction with KDHE, began an outbreak investigation at 10:00 a.m. that morning. The aim of the investigation was to determine the source of illness and to implement appropriate control measures. A special online questionnaire was developed using Qualtrics. Attendees of the event were notified by email and Facebook about the gastrointestinal illness outbreak investigation and were provided a link to the survey.

Key Investigation Findings

- A case was defined as vomiting or diarrhea in an individual who attended one or more events held during the Midwest Shabbaton in Lawrence, KS and developed illness within 48 hours of the event(s).
- There were 26 individuals that completed the survey and 21 met the case definition. Three additional cases were identified through self-reported illness complaints to the KDHE epidemiology hotline. Online surveys were not completed for these three persons.
- The number of individuals who were sent the survey is unknown because the event organizer elected to distribute it.
- Among cases, the Shabbat Dinner held on Friday and the Festive Shabbat Lunch were the most attended (Figure 1).

Figure 1: Events Attended by Cases (n=21)

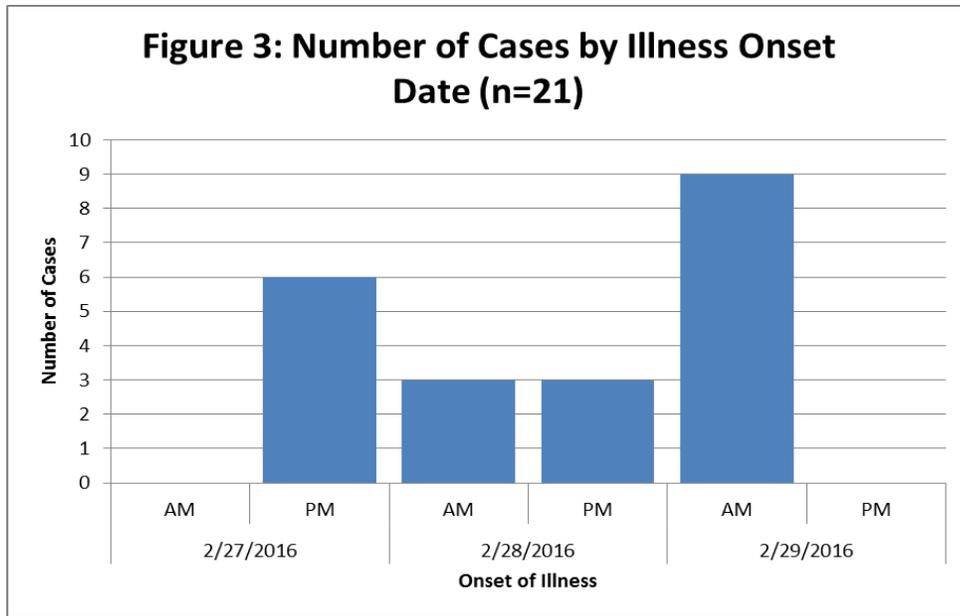
Event	Number of Cases (%)
Shabbat Dinner (2/26/16, 6:45 PM-9:00 PM)	20 (95%)
Breakfast at the Chabad Lounge (2/27/16, 9:00 AM-11:00 AM)	7 (33%)
Festive Shabbat Lunch (2/27/16, 12:30 PM-2:00 PM)	18 (86%)
Mega Event at Epic Fun Center (2/27/16, 7:30 PM-9:30 PM)	13 (62%)
Closing Brunch at Chabad House Tent (2/28/16, 9:30 AM-10:30AM)	5 (24%)

- Cases were identified in attendees from 7 states including Kansas, Missouri, Illinois, Iowa, Minnesota, Tennessee, and Florida.
- The most common symptom was nausea (95%) followed by vomiting (76%), and diarrhea (57%) (Figure 2).

Figure 2: Symptoms reported among cases

Symptom	# of cases with symptom	% of cases with symptom
Nausea	20	95%
Stomach Cramping	17	81%
Vomiting	16	76%
Muscle Aches	16	76%
Headache	16	76%
Diarrhea	12	57%
Fever	7	33%

- Three stool specimens were collected and tested. All three were positive for norovirus; two specimens were subtyped as genogroup II and one was not subtyped.
- Onset of illness ranged from February 27 – February 29, 2016 (Figure 3).



- All food was prepared by event organizers and included items such as gefilte fish, roasted chicken, challah bread, deli rolls with corned beef, pasta, and hot dogs.

Conclusion and Recommendations

This was an outbreak of norovirus associated with attendance at the Midwest Shabbaton in Lawrence, KS. The epidemiologic and clinical data collected was insufficient to determine if a food or drink item was the source of illness, or if illness was spread from person-to-person, or both. A majority of those that became ill had onset dates on February 29, 2016, the last day of the event.

Several challenges were identified during this investigation. A complete list of food items served was not provided by the event organizers, which hindered the ability to associate a food or drink item

with illness. A list of attendee's email addresses was requested but not provided by the organizers; the link to the survey was distributed by an outside organization. While this event required registration, some events were open to the public which made it difficult to disseminate the survey and determine the total number of attendees.

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