Las Vegas Outbreak:
Using Environmental Assessments to Identify the Environmental Antecedent

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Southern Nevada Health District

February 2019
Sunday July 1\textsuperscript{st} – First contact

- Resort contacts SNHD asking about increased GI upset in the valley

- SNHD responds at 3:50 Sunday afternoon
Sunday July 1 - Info Gathering

- Convention Attendees
  - 25 of 135 ill

- Slot Department Employees
  - 15 ill

- Banquet staff
  - 1 called out sick 7/1/18

- Hotel Guests ~12 ill*
  - 6/28/18 – 3 people
  - 6/29/18 – 3 people
  - 6/30/18 – 4 people
  - 7/01/18 – 2 people
  - *Unknown if any of these were also part of the 25 ill from the convention
Monday July 2\textsuperscript{nd}

- Epi and EH walkthrough

<table>
<thead>
<tr>
<th>Met with management</th>
<th>Risk Management, Hotel Operations, Head Chef, Head of Food and Beverage, Head of EVS</th>
</tr>
</thead>
</table>
| Walk through of facility | Banquet areas – location  
Housekeeping – discussed turnover of rooms, disinfectants  
Kitchens – *observed multiple handsink/handwashing issues* |
| Reviewed Documents | Security logs, biohazard response logs, employee callout logs, guest illness complaints, protocols |
| Clarified Communication | Linked PIO to PIO  
Established points of contact for each agency |
# Biohazard Response Log

<table>
<thead>
<tr>
<th>MONTH</th>
<th>DATE</th>
<th>ID</th>
<th>NAME</th>
<th>EXPOSURE</th>
<th>PPE EQUIPMENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>02/02/19</td>
<td></td>
<td></td>
<td>Vomit</td>
<td>Bio kit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/11/19</td>
<td></td>
<td></td>
<td>Vomit</td>
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<td></td>
<td></td>
<td>Vomit</td>
<td>Bio kit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2/1/18</td>
<td></td>
<td></td>
<td>Vomit</td>
<td>Bio kit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2/1/18</td>
<td></td>
<td></td>
<td>Vomit</td>
<td>Bio kit</td>
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<td></td>
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<td></td>
<td></td>
<td>Vomit</td>
<td>Bio kit</td>
<td></td>
</tr>
</tbody>
</table>

- Vomit: Gastrointestinal contamination
- Bio kit: Biological hazard response kit
- Location: Various areas, including Showroom, Temple Bar, and Security Room.
Early Reports
Early Reports: Buffet...or Convention

- Two families, about 8 ill
  - Shared a meal together at buffet
  - Attended a convention together
Environmental Assessment
First Stop: Buffet

- Tuesday, July 3 Response:
  - Attempted environmental assessment
  - No dinner service – buffet already closed
  - Sat down with chefs
    - Food safety
    - Employee health
    - Handwashing
    - Contamination prevention
Wednesday July 4
Result: Mutual Decision to Close
Next morning, July 5th

- Epi update:
  - Dozens more ill cases reported eating at the buffet
Food Safety Surveys

- Was the food safety behavior of the buffet a trend?
- Focused risk factor surveys of all food outlets
  - Norovirus = personal hygiene, handwashing, hand sinks, contamination of RTE food
- Conducted over the next few days including weekends
## Findings

<table>
<thead>
<tr>
<th>Uncontrolled Risk Factor</th>
<th>Food Safety Concern Observed</th>
<th># of Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor Personal Hygiene – Handwashing</td>
<td>Washing hands improperly</td>
<td>Multiple</td>
</tr>
<tr>
<td></td>
<td>Changing gloves without washing hands</td>
<td>Multiple</td>
</tr>
<tr>
<td></td>
<td>Active food and beverage preparation occurring without hand sinks present in area</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Wiping gloves on soiled apron</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Touching food contact surface of clean plate ware</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poor Personal Hygiene – Hand sink issues impeding proper use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand sinks with significant leaks/clogs/plumbing issues deterring their use</td>
</tr>
<tr>
<td>Hand sinks not stocked (missing soap or paper towels)</td>
</tr>
<tr>
<td>Using hand sink to fill bucket</td>
</tr>
<tr>
<td>Hand sinks with insufficient hot water (less than 100)</td>
</tr>
<tr>
<td>Dump sinks and food prep sinks stocked with soap dispensers</td>
</tr>
</tbody>
</table>
Epi Findings
Case Contact with Conventions

<table>
<thead>
<tr>
<th>Reported Event*</th>
<th># of complaints (n= 363)</th>
<th>% of complaints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not mentioned</td>
<td>198</td>
<td>54.55</td>
</tr>
<tr>
<td>Onsite #1</td>
<td>23</td>
<td>6.34</td>
</tr>
<tr>
<td>Onsite #2</td>
<td>40</td>
<td>11.02</td>
</tr>
<tr>
<td>Offsite #1</td>
<td>32</td>
<td>8.82</td>
</tr>
<tr>
<td>Offsite #2</td>
<td>1</td>
<td>0.28</td>
</tr>
<tr>
<td>Offsite #3</td>
<td>36</td>
<td>9.92</td>
</tr>
<tr>
<td>Offsite #4</td>
<td>12</td>
<td>3.31</td>
</tr>
<tr>
<td>Offsite #5</td>
<td>21</td>
<td>5.79</td>
</tr>
</tbody>
</table>

*events held on-site and guests staying at resort with events off-site

Original hypothesis: convention related

Local news story: convention related

Data shows majority of cases did not visit a convention
### Complaints Associated with Restaurants

<table>
<thead>
<tr>
<th>Reported restaurants</th>
<th># of complaints</th>
<th>% of complaints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurant A</td>
<td>5</td>
<td>1.38</td>
</tr>
<tr>
<td>Restaurant B</td>
<td>13</td>
<td>3.58</td>
</tr>
<tr>
<td>Buffet</td>
<td>119</td>
<td>32.78</td>
</tr>
<tr>
<td>Restaurant D</td>
<td>2</td>
<td>0.55</td>
</tr>
<tr>
<td>Restaurant E</td>
<td>42</td>
<td>11.57</td>
</tr>
<tr>
<td>Restaurant F</td>
<td>3</td>
<td>0.83</td>
</tr>
<tr>
<td>Restaurant G</td>
<td>42</td>
<td>11.57</td>
</tr>
<tr>
<td>Restaurant H</td>
<td>8</td>
<td>2.2</td>
</tr>
</tbody>
</table>
Lab Findings
It’s Noro

- Six cases submitted stool samples
  - 4 local
  - 2 out of state

- Testing conducted
  1. Stool cultures
  2. STEC enzyme immunoassay (EIA)
  3. Norovirus nucleic acid
  4. Gastrointestinal panel

- Results
  - 5 positive for norovirus genotype II
  - Negative on all other enteric diseases
Industry Notification

- Notified properties along resort corridor of increased GI illness
- Provided resources for prevention
Outcome
Epidemic Curve

363 cases identified

92% guests, 8% employees

Last case with potential ongoing exposure was July 10th
## Timeline of EH Response

<table>
<thead>
<tr>
<th>Date</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday, July 1st</td>
<td>• First contact, meeting with management</td>
</tr>
<tr>
<td>Monday, July 2nd</td>
<td>• Walk through of property</td>
</tr>
<tr>
<td>Tuesday, July 3rd</td>
<td>• Attempt to investigate buffet, but closed</td>
</tr>
<tr>
<td></td>
<td>• Sit down with chefs</td>
</tr>
<tr>
<td>Wednesday, July 4th</td>
<td>• Environmental assessment of buffet</td>
</tr>
<tr>
<td>Thursday, July 5th</td>
<td>• Focused food surveys at all food outlets</td>
</tr>
<tr>
<td></td>
<td>• Aquatic Health survey</td>
</tr>
<tr>
<td></td>
<td>• Public Accommodations survey</td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Saturday, July 7th</td>
<td>• Focused food surveys</td>
</tr>
<tr>
<td>Sunday, July 8th</td>
<td>• Focused food surveys</td>
</tr>
<tr>
<td>Tuesday, July 10th</td>
<td>• Focused food surveys</td>
</tr>
<tr>
<td>Tuesday, July 17th</td>
<td>• Successful buffet re-inspection</td>
</tr>
<tr>
<td>Friday, July 20th</td>
<td>• Buffet reopens</td>
</tr>
</tbody>
</table>
What does it take to stop an outbreak?

- **Facility Wide:**
  - Disinfectants switched to those effective against norovirus
  - Disinfection frequency increased
    - Buttons, railing, handles, beer buckets at pool, slots, tables, check-in counters
  - **Staff stationed inside bathrooms to disinfect stalls after use**
  - Room service staff flagged rooms ordering items indicative of a GI illness
  - Thorough disinfection of rooms of ill guests before turnover
  - **Biohazard response plan revised to disinfect a full 30 feet around vomit**
  - Pool management to log emetic events
  - All pools superchlorinated
  - Company hired to fog disinfectant in multiple high-use areas
  - Consultant hired
  - **Points removed from staff calling out sick**
What does it take to stop an outbreak?

- **Food Service Related**
  - Staff added to monitor customer tong usage
  - Room chef hired
  - Buffet layout updated
    - One row only of food to prevent reaching/contaminating
  - Week-long process of training and monitoring on handwashing and sanitation
  - Malfunctioning equipment repaired
  - Deep clean and disinfection of entire area multiple times
  - Refrigeration logs added
    - Filled out every 2 hours, reviewed by room chef daily, spot-checked by head chef
  - Time as a public health control plan updated
Environmental Antecedent

For the Resort
Environmental Antecedent

Lack of Food Safety Culture

- **Identification:**
  - Site evaluation observations and manager’s interview

- **Importance:**
  - More than just fixing tongs and improving handwashing

- **Fixes:**
  - Weeklong training and supervision
  - Implementing logs and reviewing them

- **Recommendations:**
  - Active managerial control
  - Identify good and control bad behaviors
  - Keep talking about food safety
  - **Explain the why, share memorable stories**
  - Engineer the right answer
  - Gloves near hand sink → promote handwashing before glove use
Lessons Learned

For SNHD
Lessons Learned for SNHD

- Relationship between regulator and regulated is crucial
  - This started because resort came to us first
    - Encourage inspectors to let restaurants know they can reach out to health department for support
  - Maintaining a good relationship led to swift implementation of corrective actions
Communications Toolkit | Media Relations

Much of your communication with the public is done through the media, so it is important to maintain a positive relationship with them. This toolkit compiles communication tips, tools and templates to be used or modified when working with the media during foodborne illness outbreaks.

In this toolkit
Preparing for media interviews tip sheet
Communications Plan Template: A thoughtful communication plan can help get everyone on the same page. Modify this one to meet your needs.
The Outbreak Talking Points Template has key points for talking to the public and the media.
The Periodic Table for High-Concern Communication helps frame critical messages.
A message map can help you organize messages.
77 example questions can be useful when planning risk communications.
Sample news releases can be modified to meet your needs.

More resources
• ASTHO's Communication in Risk Situations manual
• CDC's Interview Tips Handout
• CDC's Crisis Emergency Risk Communication Checklist
• CDC's Everyday Words for Public Health

Before an interview
Ensure you are the right person to do the interview, and ask the reporter:
□ What they want to cover.
□ The format and duration. If it will be for TV or radio ask:
□ Will it be live or taped?
□ How long is the segment?
□ If you can help them get more information to prepare for the interview.
□ The focus of the article and who else they may interview.
□ For example questions

Communications Toolkit | Industry Relations

During an outbreak, you will need to communicate with the facility, establishment, or venue in which the outbreak is occurring. These can be difficult conversations as the operator grapples with the ramifications of an outbreak associated with their business or product. Preparing in advance and offering support can build trust and facilitate information sharing, making your job easier.

This toolkit is a compilation of resources that can be used or modified when working with Industry or an establishment during a foodborne illness outbreak.

In this toolkit
Summary slides template that can be used to share information.
Fact sheets you can provide implicated facilities:
- E. Coli (Spanish)
- Listeria (Spanish)
- Salmonella (Spanish)
- Norovirus: Facts for Food Workers
- Detecting & Investigating Outbreaks
The Can Restaurant Managers Talk with Sick Workers guide helps managers understand their rights.
Obtaining Food Transaction Records from Credit/Debit Cards guide.
Non-cooperation letters can be useful for challenging facilities.
Customer and Government Shopper Card Request forms can be modified to meet your needs.
A Distributor and Supplier Information Form can be used for traceback or you can use the Traceback Information Gathering worksheet.
Contact us for help with developing scripts you can use when calling an implicated facility about an outbreak.

More resources
• ASTHO's Communication in Risk Situations manual
• CDC's Crisis Emergency Risk Communication Checklist
• CDC's Everyday Words for Public Health Communication
• CIFOR Industry Guidelines
Clean Up & Disinfect For NOROVIRUS A STOMACH BUG
Act fast! Clean up any vomit or diarrhea immediately.

1 WIPE UP SURFACES
   a. Use a disposable wipe or paper towel to clean and disinfect surfaces.
   b. Use a cloth or sponge moistened with water and soap to clean and disinfect surfaces.
   c. Use a cloth or sponge moistened with a solution of bleach and water.

2 CLEAN UP SURFACES
   a. Remove vomit or diarrhea right away!
      - Wearing protective clothing, such as disposable gloves, apron and/or mask, wipe up vomit or diarrhea with paper towels.
      - Use a cloth or sponge moistened with water and soap to clean and disinfect surfaces.
   b. Use soap and water to wash hands after touching vomit or diarrhea.
   c. Use a cloth or sponge moistened with a solution of bleach and water to clean and disinfect surfaces.

3 DISINFECT SURFACES
   a. Use a solution of chlorine bleach and water to disinfect surfaces.
   b. Use a solution of hydrogen peroxide and water to disinfect surfaces.

4 WASH YOUR HANDS
   a. Wash your hands with soap and water for at least 20 seconds.
   b. Use a hand sanitizer containing at least 60% alcohol.

Facts about Norovirus
Norovirus is the leading cause of outbreaks of diarrhea and vomiting in the US and it spreads quickly.
Norovirus spreads by contact with an infected person or by touching a contaminated surface or object contaminated food or drinking water.
Contact transmission occurs when you touch your mouth with your hands after touching a contaminated surface or object.

These directions should be used to respond to any vomiting or diarrhea accident.

Clean-Up
1. Remove vomit or diarrhea right away!
   a. Wearing protective clothing, such as disposable gloves, apron and/or mask, wipe up vomit or diarrhea with paper towels.
   b. Use a cloth or sponge moistened with water and soap to clean and disinfect surfaces.
   c. Use a cloth or sponge moistened with a solution of bleach and water.

2. Use soap and water to wash hands after touching vomit or diarrhea.

3. Use a cloth or sponge moistened with a solution of bleach and water to clean and disinfect surfaces.

4. Wash your hands with soap and water for at least 20 seconds.

Disinfect-Surfaces
1. Use a solution of chlorine bleach and water to disinfect surfaces.

2. Use a solution of hydrogen peroxide and water to disinfect surfaces.

3. Rinse all surfaces intended for food or mouth contact with plain water before use.

4. If hard surfaces are affected, wipe down with a solution of bleach and water.

5. If clothing or other fabrics are affected, wash in hot water with detergent.

Norovirus can remain on surfaces even after cleaning.

People can transfer norovirus to others for at least three days after becoming sick.

Resources
For more information on norovirus prevention, please see http://www.cdc.gov/norovirus/preventing-infection.html.
Can Restaurant Managers Talk with Sick Workers?
3 Things Restaurant Managers Need To Know

Restaurant managers: Talk to your employees about their symptoms and diagnoses so you can make sure sick workers don’t spread foodborne illness.
- Nearly half of restaurant-related outbreaks are caused by sick food workers.
- Managers need to know if their workers are sick so they can decide if they should handle food.

Three Things To Know

1. The Food Code encourages employee and manager conversations about foodborne illness.
   - The Food Code is a science-based model code published by the Food and Drug Administration that states can use to develop or update their food safety rules to help prevent illness and outbreaks.
   - It says that employees should tell their managers about possible foodborne illness symptoms and that it is the manager’s responsibility to ensure employees are aware of these reporting requirements.
   - Most state and local food codes in the United States are modeled on the FDA Food Code.

2. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) does not prevent restaurant managers from asking employees about foodborne illness symptoms and diagnoses.
   - HIPAA sets privacy standards for protected health information.
   - HIPAA does prevent a health care provider from sharing health information about an employee with that employee’s manager but it does not prevent a restaurant manager from asking an employee about their illness symptoms.

3. The Americans with Disabilities Act of 1990 (ADA) does not prevent managers from asking employees about foodborne illness symptoms and diagnoses.
   - ADA seeks to prevent discrimination and ensure equal opportunity for persons with disabilities.
   - Most foodborne illnesses are mild and short-term and are not considered disabilities under ADA.
   - If an employee does not have an ADA disability, the manager can follow the Food Code’s guidance without considering the ADA. And in the rare event that an employee does have a foodborne illness that is considered a disability, employers would consider both ADA and the Food Code.

Restaurant managers and employees can work together to prevent the spread of foodborne illnesses.

Where Can I Learn More?
For access to the full article this content is based on and other helpful links, visit www.cdc.gov/nceh/dhs/activities/can-restaurant-managers-talk-with-sick-workers.
Vomiting Larry

- 3 minute training video
- https://www.youtube.com/watch?v=sLDSNvQjXe8&t=6s
NEARS Manual

- Step by step guide for conducting environmental assessments
- Guidance for uploading
- NEARS Community
Thank You

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