Surviving Norovirus Investigations

A Puking Primer
A few days before Labor Day ...
Time to shop for all the essentials.
What are the typical norovirus symptoms?

A. Sneezing, coughing, headaches
B. Vomiting, diarrhea, nausea, and feeling like you are going to **die**
C. Fever, skin rash, body and muscle aches
D. Fever, headache, stiff neck, nausea and vomiting
Nausea sudden takes a nasty turn...
What is the infectious dose of norovirus?

A. <20 particles
B. 50-100 particles
C. 100-1000 particles
D. >1000 particles
Sick and embarrassed she leaves the store immediately.
Store maintenance is paged to clean the mess
What should be in the mop bucket to clean up the vomit?

A. Soap
B. Ammonia
C. Bleach
D. Hot Water
Who has been exposed?

Who could be exposed?
How far can vomit travel?

A. Up to 2 feet
B. Up to 8 feet
C. Up to 10 feet
D. Not as far as I can run
Day before Labor Day

preparing food for the Homeless Holiday event
Labor Day
And elected officials were there, too....
What is the incubation period for norovirus?

A. 12-48 hours
B. 3-5 days
C. 4-7 days
D. >7 days
Holiday Travel

MASSIVE CROWDS AT SKY HARBOR AIRPORT
TRAVELERS MISSED FLIGHTS; STUCK IN LONG LINES
Two Days after Labor Day

How is the Health Department notified?
What is Kaplan’s Criteria

A. Incubation period of 24-48 hours

B. Illness lasting 12-60 hours

C. More than 50% of people with vomiting

D. All of the above

E. Who is Kaplan?
When should samples be collected for norovirus testing?

A. 48-72 hours after onset

B. 5-7 days after onset

C. 10-14 days after onset

D. Never, who wants to collect stool or vomit samples
Phylogenetic Tree

Pairwise (OG:100%,UG:0%) (FAST:2,10) Gapcost:0%
SEQ_RegC-GII

Key
- 2013-SP-0066
- 2013-SP-0067
- GII_5_Hillingdon_GBR90
  - 2013-SP-0230
  - 2013-SP-0246
  - 2013-SP-0247
  - 2013-SP-0248
  - 2013-SP-0249
  - 2013-SP-0250
- GII_5_Hokkaido133_JPN03
- GII_10_Erfurt546_DEU00

OutbreakDate
- 2013-10-01
- 2013-10-01
- 2013-9-24
- 2013-9-28
- 2013-9-28
- 2013-9-28
- 2013-9-28
- 2013-9-28

- Unrelated October Outbreak
- Person 1
- Labor Day Event Participants

Person 1
Grocery Store employee travels back home...

Crappiest flight ever: 26 passengers with gastroenteritis make 13 hour flight a living hell

From NEWS.COM.AU
Last Updated: 3:33 PM, August 1, 2013
Posted: 10:57 AM, August 1, 2013

Thirteen hours in the air, eight toilets and 26 passengers violently ill with gastroenteritis.

That was the scene when an international flight became the trip from hell after 26 passengers fell sick during a Qantas flight.
How can Lab, Epi, EH
Keep this outbreak from spreading?
When does the media get involved?

How does this shape response?
Options for preventing spread

**Clean-up and Disinfection for Norovirus (“Stomach Bug”)**

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

1. **Clean up**
   - Remove vomit or diarrhea right away!
   - Wear protective clothing, such as disposable gloves, apron and/or mask, wipe-up vomit or diarrhea with paper towels.
   - Remove vomit or diarrhea material on surfaces with a disposable wipe or wipe-up vomit or diarrhea liquid.
   - Air out the room or open windows.
   - Dispose of paper towels in a plastic bag or household trash.
   - Use soap and water to wash surfaces that contacted vomit or diarrhea and all nearby high-touch surfaces, such as door knobs and toilet handles.
   - Disinfect thoroughly with a bleach solution.
   - Wipe dry with paper towels.

2. **Disinfect surfaces by applying a chlorine bleach solution**
   - Prepare a bleach solution:
     - Mix 1 cup of bleach with 1 gallon of water.
   - Apply the solution:
     - **If hard surfaces are affected**:
       - Apply a 1:10 dilution of bleach on a damp cloth or sponge.
     - **If clothing or other fabrics are affected**:
       - Apply a 1:10 dilution of bleach to the affected fabric and cover with a clean cloth and wash in the hottest water possible.
   - Air dry surfaces unlikely to have food or mouth contact.
   - Rinse all surfaces intended for food or mouth contact with plain water before use.

3. **Wash your hands thoroughly with soap and water**
   - Hand sanitizers may not be effective against norovirus.

**Facts about Norovirus**

- Norovirus is a highly contagious, non-bacterial illness.
- Norovirus can be spread by contaminated food or water, or by contact with vomit or diarrhea.
- Norovirus can cause severe vomiting, diarrhea, and stomach cramps.
- Norovirus is spread through the fecal-oral route.

**Don’t stop here:** Seemings can remain on surfaces even after cleaning.

**Attack of the Norovirus**

A group of highly contagious viruses that cause “stomach flu” or gastroenteritis (gas-tro-en-ter-i-tis)

**Repel it by frequently:**

- Wash your hands with soap + water.
- OR using an alcohol-based hand sanitizer.
- (especially after toilet visits and before eating and/or preparing food)
- AND avoiding sharing food, utensils and drinking containers.

**Symptoms can begin suddenly, and may include:**

- Nausea
- Vomiting
- Diarrhea
- Stomach cramping
- A low-grade fever
- Chills
- Muscle aches
- General sense of tiredness

Most individuals recover from norovirus in 1-2 days on their own by treating symptoms and staying hydrated.

**www.health.arizona.edu**
Norovirus in One Minute
Time to collaborate and "disinfect" the room

Everyone reach down and pick up one or two pom-poms... unless you wish to take home a souvenir.
With Grateful Acknowledgement to:

Leslie Barclay
CDC

Julia Wolfe
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Michéle Samarya-Timm
Somerset County, NJ