

McHenry County Norovirus Outbreaks November 2010

McHenry County Department of Health
November 29, 2010

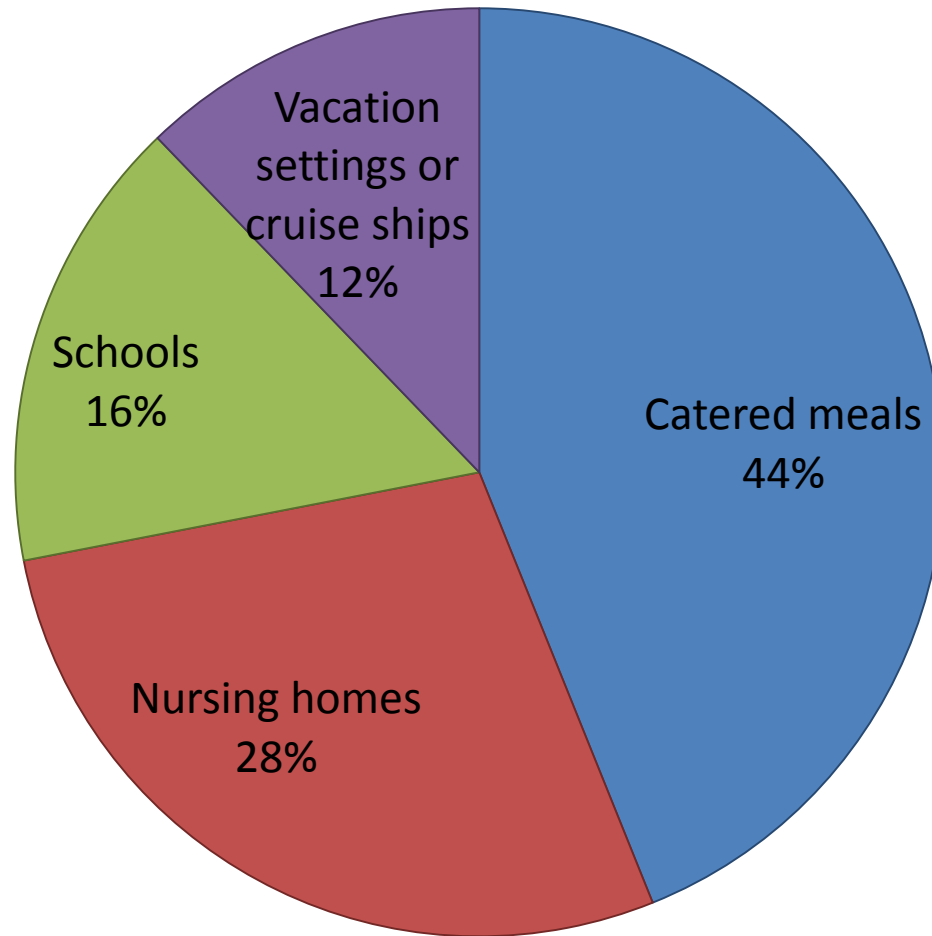
The logo for the McHenry County Department of Health (MCDH) features the letters M, C, D, and H in a bold, sans-serif font. Each letter is filled with a pattern of horizontal blue lines, creating a striped effect.

What is Norovirus



- The most common cause of gastrointestinal illness resulting from an inflammation of stomach and intestines
- AKA “Stomach Flu”, “24-hour flu”
- CDC estimates that there are more than 21 million cases annually nationwide
- Common cause of illness in long-term care, cruise ships, schools, or other crowded environment
- A very hardy virus: survives freezing; temp. up to 60C; and fairly resistant to chlorine
- There are at least 5 subgroups of norovirus

Common Locations of Outbreaks



Source: Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Diseases, Division of Viral Diseases, Norovirus: Technical Fact Sheet. Updated 23 Feb 2010.

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What Are The Symptoms?

- Common Symptoms
 - Vomiting,
 - diarrhea,
 - nausea and
 - abdominal pain
- Less frequent
 - Fever, low-grade and transient (<50% of cases)
 - Myalgia
 - Malaise
 - Headache
- Dehydration common in elderly
- Up to 30% of infected may be asymptomatic



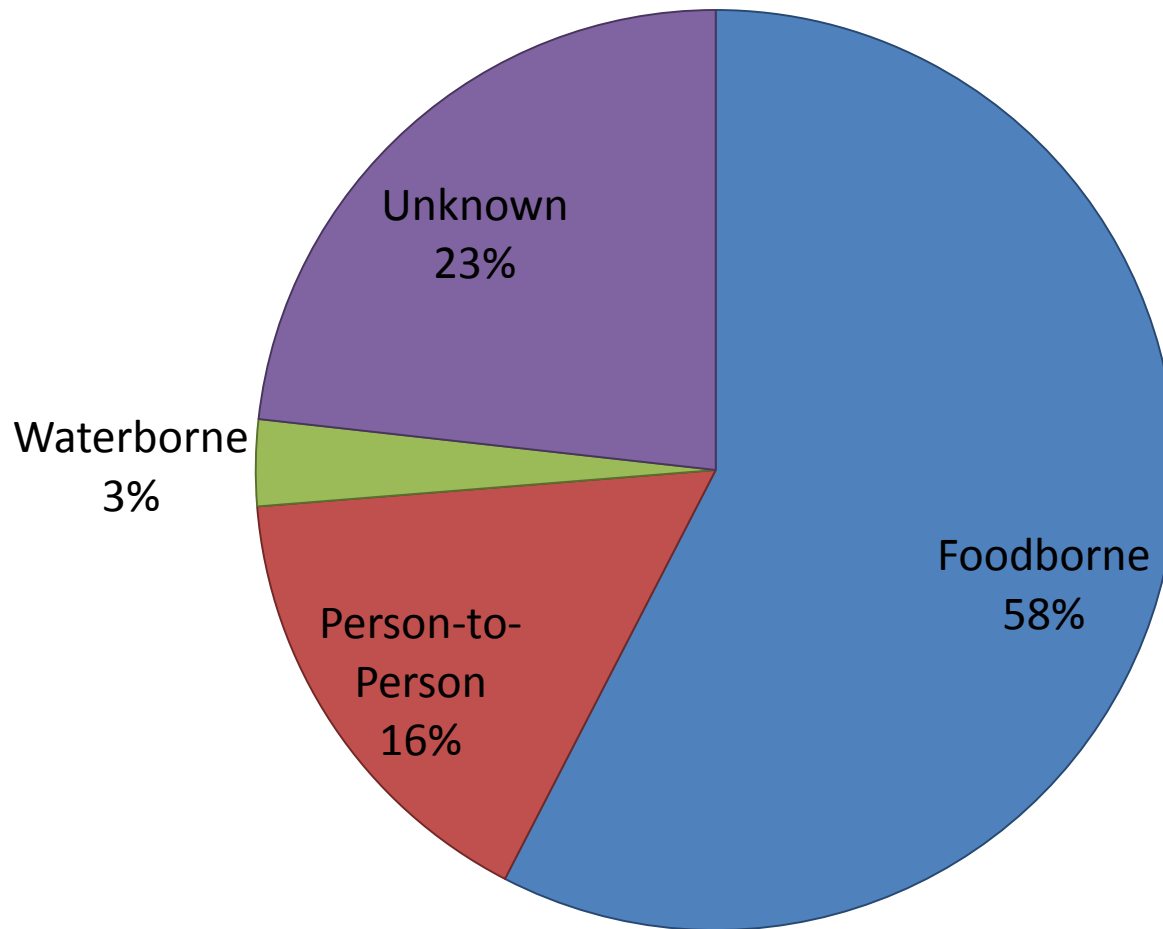
- Incubation: 24 – 48 hours
- Duration of illness: 12 – 60 hours
- Average attack rate: 45%

How Is Norovirus Spread?

- *Highly Contagious!! Infectious dose is only 10 – 100 viral particles*
- Passed in feces and vomit of infected persons
 - Can be spread person-to-person
 - Touching contaminated surfaces
 - Consuming contaminated food or water
 - Inhaling contaminated droplets of vomit



Common Modes of Transmission



Source: Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Diseases, Division of Viral Diseases, Norovirus: Technical Fact Sheet. Updated 23 Feb 2010.

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It's Everywhere: Prolonged Outbreak at LTCF

Jan – Feb 2002

- 240 ill at LTCF in Philadelphia
 - 52% of residents and 46% of staff
- Positive environmental cultures:
 - Toilet seat (2 days after onset)
 - Common dining table (2 days after onset)
 - Bedrail (2 days after onset)
 - Toilet seat and handle (same day as onset)
 - Elevator Button (used only by staff)

Testing for Norovirus

- Testing uses the reverse transcriptase polymerase chain reaction (RT-PCR).
- RT-PCR detects the norovirus RNA and can be used to test stool and emesis samples, as well as environmental swabs in special studies. Identification of the virus can be best made from stool specimens taken within 48 to 72 hours after onset of symptoms. Virus can sometimes be found in stool samples taken as late as 2 weeks after recovery.
- McHenry County was first county to submit stool specimens for Norovirus testing to IDPH lab 10 years ago
- IDPH does testing; private labs have also started



Do People Become Immune to Norovirus

- Immunity may be strain-specific and lasts only a few months
- Strains can periodically emerge, displace other strains
- Given the genetic variability of noroviruses, individuals are likely to be repeatedly infected throughout their lifetimes. This may explain the high attack rates in all ages reported in outbreaks.
- Recent evidence also suggests that susceptibility to infection may be genetically determined, with people of blood group O being at greatest risk for severe infection.

How is Norovirus Controlled?

- Most important control measures



- Handwashing, handwashing, handwashing

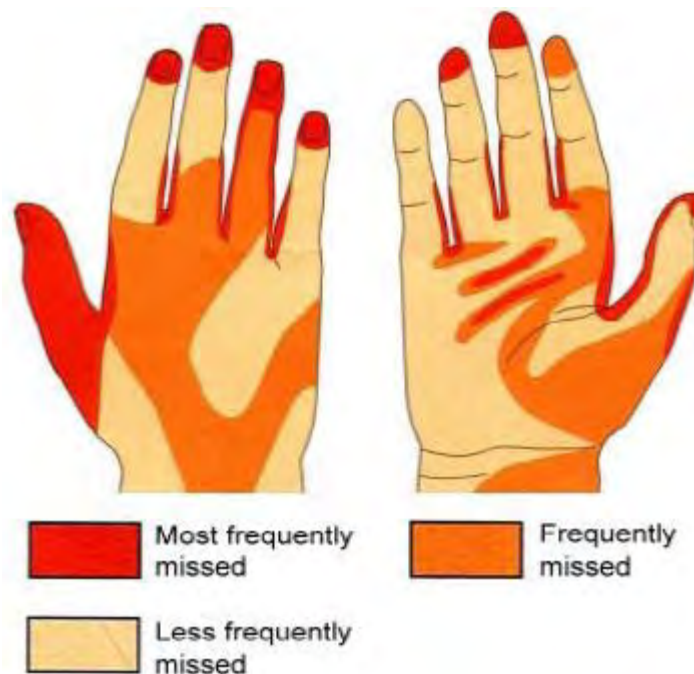
- Cleaning and disinfecting



- Environmental controls

Handwashing: *The #1 Way to Prevent the Spread of Norovirus*

- Contaminated hands are probably the single most common vector for the spread of norovirus
- Alcohol-based (60%) hand sanitizer may be used when soap and water are unavailable



Why is MCDH Concerned about Norovirus?

- ❑ Spreads Rapidly

- ❑ Can cause dehydration which can require hospitalization for high risk persons: young, elderly, those with other health conditions.

What is an Outbreak?

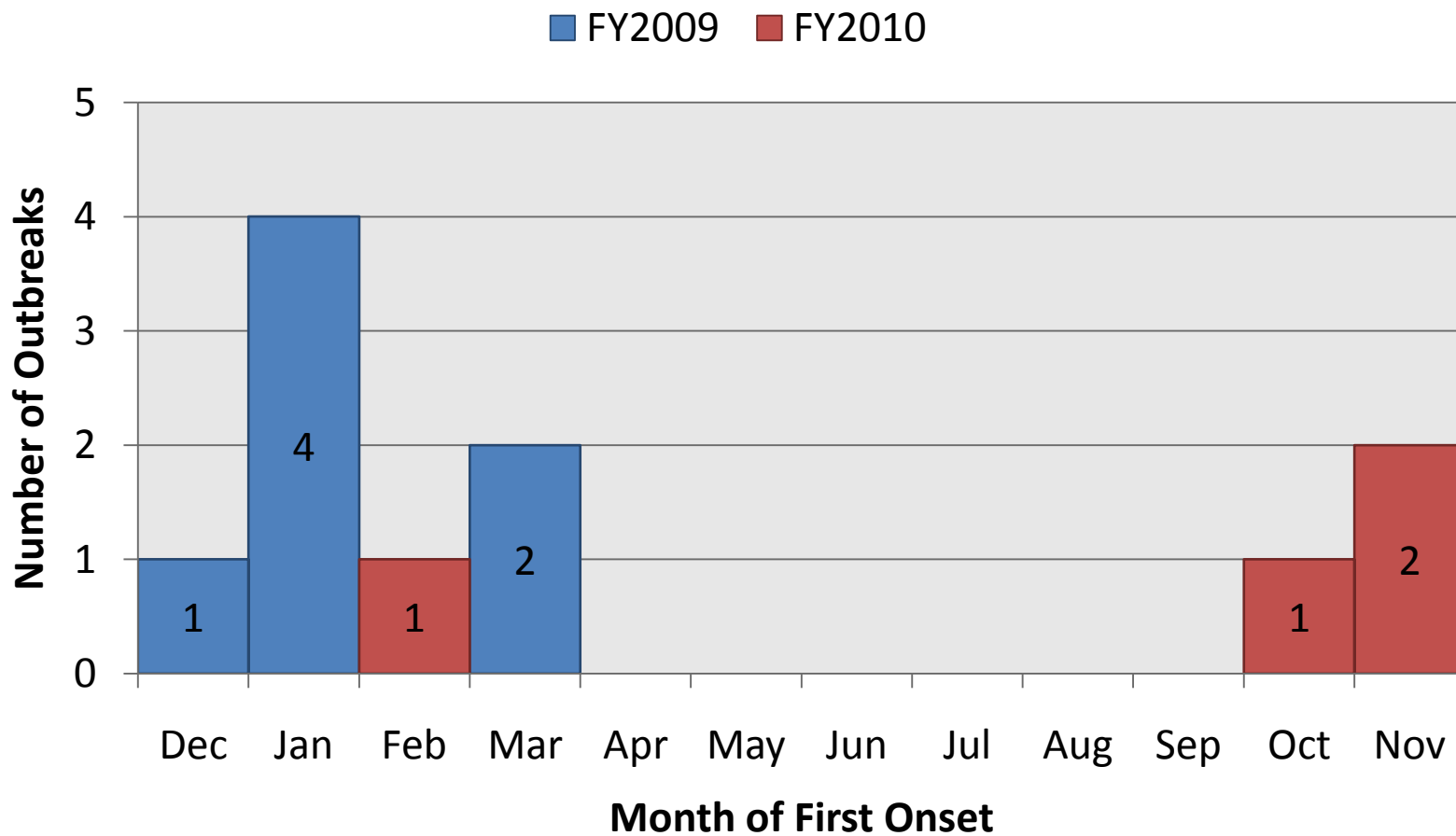
- In general, more illness than expected
- What is abnormal for the facility
- Schools and Long-Term Care: greater than 10% of population ill

McHenry County Reported Norovirus Outbreaks in Long-Term Care Facilities: Dec 2008 – Nov 2010

- 11 confirmed outbreaks
- Generally occur between November and March
- 449 total ill
 - 35% of residents were ill on average
 - 21% of staff were ill on average
- 25 hospitalizations
 - Average hospitalization rate: 6% (range: 0 – 18%)
- 1 death

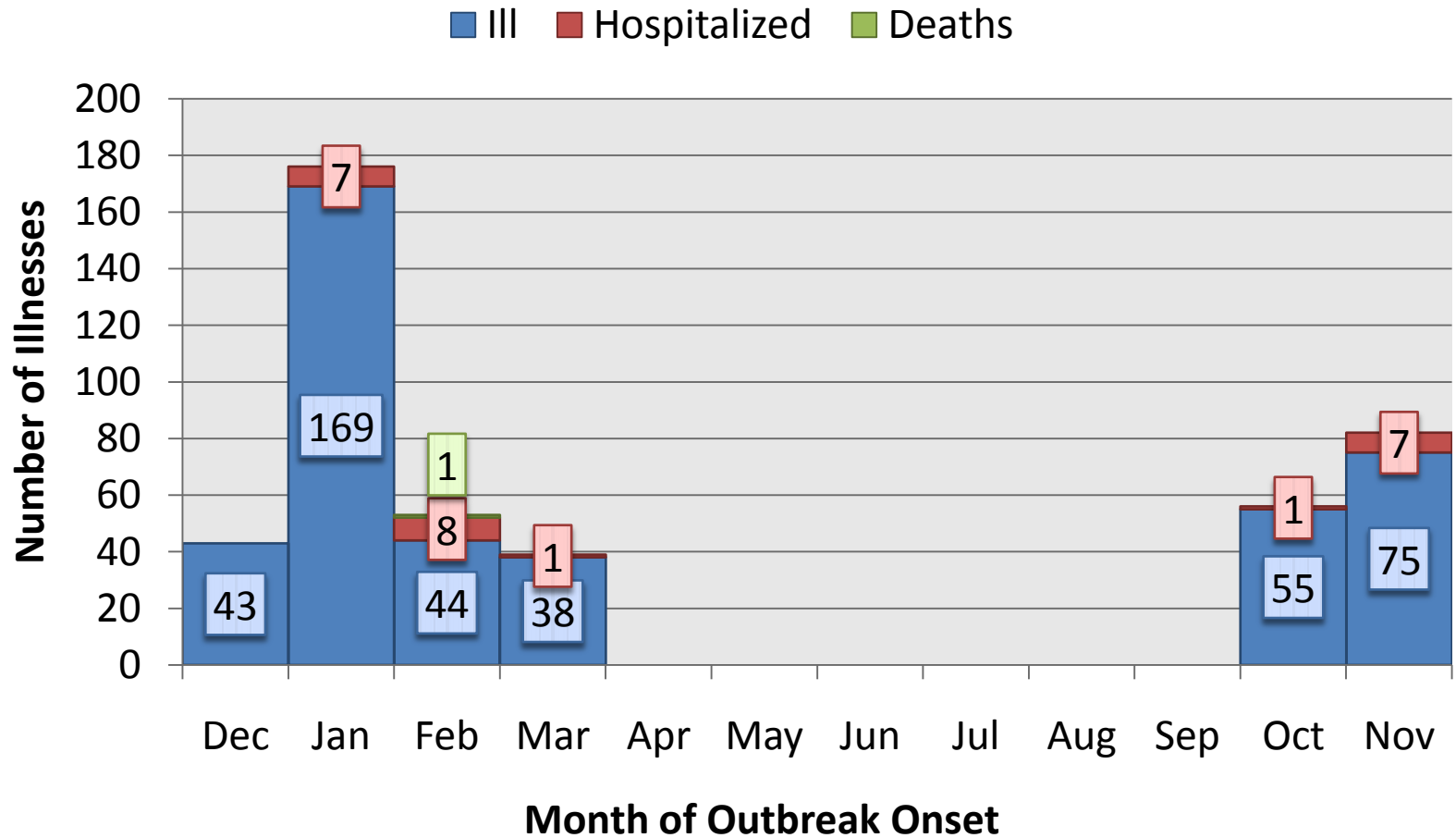
- Average duration of outbreak: 15.6 days
 - Range: 4 – 29 days

Confirmed Norovirus Outbreaks In McHenry County Long-Term Care Facilities by Month: FY2009 – FY2010



Confirmed Norovirus Outbreaks in McHenry County Long-Term Care Facilities

Illnesses, Hospitalizations and Deaths by Month of Outbreak Onset: FY2009 – FY2010



Norovirus Guidelines

- Establish/review policies for handling ill staff and residents & outbreaks
- Orientation and yearly staff training to include norovirus
- Educate all staff and residents on proper hand washing procedures.
- Encourage visitors to wash hands thoroughly upon entering and leaving facility
- Provide waterless hand sanitizer for visitor/resident/staff use between hand washing
- Staff use of gloves, masks
- Hand washing
- Sanitizing common touch surfaces (times/day)
- Exclude/send home ill staff and/or 3rd party contractors with active vomiting and/or diarrhea
- 48 hour symptom free before returning
- Avoid bare hand contact with Ready-to-Eat foods
- Eliminate shared food items (i.e. cookies, cake, boxes of bulk candy and popcorn)



ATTENTION VISITORS!!!

We presently have a number of ill residents. Please wash your hands before visiting and before leaving. You may wish to reconsider visiting at this time.

If you have any questions please contact either the Administrator _____ or the Director of Nursing _____.

Thank you

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What MCDH Has Done

- Provided FAQ sheets, IDPH and MCDH Control Guidelines to all Long Term Care Facilities, Schools, Pre-Schools, daycares
- Met with long term care facilities to review guidelines
- Monitor Long Term Care Facilities daily for new cases numbers and locations
- Called schools when surveillance shows GI illness increase to answer questions and review guidelines
- Providing handwashing education to staff of 13 Long Term Care Facilities (Out of 22 in County)

Sanitizing

- Establish Standard Operating Procedures for cleaning and sanitizing common touch surfaces located in all public and private rooms (door knobs, light switches, drinking fountains, faucet handles, railings, etc..) for outbreak and non-outbreak periods.
- Non-Outbreak: 1x per day
- Outbreak: 2x per day

Chlorine Bleach

- 200 ppm stainless steel, food/mouth contact items, toys
 - 1 tablespoon bleach/gallon of water
- 1000 ppm non-porous surfaces, tile floors, counter-tops, sinks, toilets, door knobs, etc.
 - 1/3 cup bleach/gallon of water*
- 5,000 ppm for porous surfaces, wooden floors
 - 1 & 2/3 cup bleach/gallon of water*



*follow manufacturer's instructions for personal protection and product use

U.S. EPA Approved Disinfectants

The disinfectant shall be rated for Norovirus control in accordance with the manufacturer's instructions. A list of EPA approved disinfectants is available at:

www.epa.gov/oppad001/chemregindex.htm

(scroll down and double click on List G).