



# Food for Thought

An E-Bulletin from the Food and Waterborne Disease Program

ISSUE I

FEBRUARY 2011

## Welcome! Michael Wydotis

### DON'T MISS:

- Who We Are
- Web Resources
- Important Contacts
- Delicious Valentine's Day Dish

### INSIDE THIS ISSUE:

Florida Got An A	1
Outbreak in Okeechobee County	2
Alachua County Epi Team Wins!	2
Foodborne Norovirus	3
Oysters and Clams for Two	4
Web Corner	5
Where We Are	5

### Chief Editor

Sandy Lyda

### Contributing Editors

Tiffiani Onifade  
Michael Wydotis

Welcome to the first edition of the Food and Waterborne Disease Program's e-bulletin, Food for Thought! The Food and Waterborne Disease Program was created in 1994 to address the substantial public health impact of foodborne and waterborne diseases on Florida's health, and the unique challenges that are encountered in the detection, investigation, and mitigation of these diseases.

Changing patterns of behavior and global economics have complicated the public health control of foodborne and waterborne diseases in recent years and have accentuated the need for a strong public health infrastructure. The Food and Waterborne Disease Program has a unique 12 member structure in place with over 200 years of collective experience in environmental

public health. Our team regularly assists and strongly supports Florida's county health departments in meeting the demands of disease surveillance, investigation, reporting, and prevention.

We hope that Food for Thought will give you just that - food for thought, with informative case studies, spotlights on current foodborne and waterborne disease issues and trends, highlights of innovative programs and successes at the county health departments, and program resources that are available to you.

See page 5 to send us your feedback!

## Florida Got an A! Tiffiani Onifade

January 2011 - The Center for Science in the Public Interest (CSPI) released All Over the Map, a ten-year analysis of state foodborne illness outbreak reporting. The report draws on data compiled by CDC from 1998 to 2007, and provides a comprehensive illustration of outbreak reporting across the 50 states during that time period. Each state is profiled individually in the report, so that state health departments and policymakers can assess their own state's performance. CSPI has also assigned grades to the states, awarding an A to those states that meet a benchmark (provided by Oregon and Minnesota). To get an A, states reported 8 or more foodborne illness outbreaks per one million population. Those states reporting the fewest outbreaks receive failing grades. Ultimately, the report provides empirical data that can support states' efforts to bolster funding and prioritize foodborne illness issues at the state level. The report discusses at length the effects that long-term under-funding and understaffing can have on public health. CSPI hopes that the report will serve as a call to action for policymakers to properly fund and support robust health departments throughout the states.

## Outbreak at Okeechobee Correctional Institution Janet Wamnes

On October 8, the Okeechobee County Health Department (OCHD), along with Janet Wamnes, Regional Environmental Epidemiologist, responded to a probable foodborne outbreak at the Okeechobee Correctional Institution that occurred on October 7. Inmates from the confinement dorm complained of experiencing nausea, vomiting, diarrhea, and dizziness shortly after consuming the evening meal served on October 7. Only the confinement dorm inmates complained of illness. Foods served at that meal included a texturized turkey patty, rice, beans, peas, carrots, bread, margarine, iced cake, and a fortified beverage. An initial inspection of the foodservice facility on October 8 did not reveal any violations. Interviews at the confinement dorm were conducted on October 9 by OCHD staff and 2 Food and Waterborne Disease Program Regional Environmental Epidemiologists, Janet Wamnes and Robin Terzagian. Of the 130 inmates, 103 were ill and 26 were not ill, with one inmate refusing to be interviewed. A sample of the meal served on October 7 was sent to the Bureau of Laboratories in Jacksonville for analysis. *Bacillus cereus* was isolated from the turkey patty and rice mixture. The mixture also had a Standard Plate Count of 2.4 million colonies per gram of food.

After learning this information, a Hazard Analysis Critical Control Point (HACCP) investigation of the turkey patty and rice preparation was conducted on October 22. No violations were found. One theory of this outbreak was that the rice was temperature-abused by improper cooling, though it was never proven.

*B. cereus* is a Gram-positive, facultatively aerobic sporeformer whose cells are large rods and whose spores do not swell the sporangium. There are two illnesses associated with *B. cereus* (diarrheal and emetic) caused by two distinct metabolites. The emetic metabolite is heat-stable. *B. cereus* of the emetic type is characterized by nausea and vomiting within 0.5 to 6 hours after consumption of contaminated foods. Occasionally, abdominal cramps or diarrhea may also occur. Duration of symptoms is generally less than 24 hours. The presence of large numbers of *B. cereus* in a food is indicative of active growth and proliferation of the organism and is consistent with a potential hazard to health. Foods associated with the emetic-type illness outbreaks have been associated with rice products; however, other starchy foods such as potato, pasta and cheese products have also been implicated. <sup>1</sup>

<sup>1</sup>U.S. Food and Drug Administration *Bad Bug Book: Foodborne Pathogenic Microorganisms and Natural Toxins Handbook; Bacillus cereus and other Bacillus spp.*

## Alachua Epi Team Wins Holiday Door Contest

Each year the Alachua County Health Department draws well-deserved attention when their creative staff members decorate holiday-themed doors that demonstrate what their program functions are while competing in a contest for the best door display. This year's competition was strong, but the winning door prize was awarded to the Alachua Epidemiology Program with their Disease Control theme, which included a play on a popular board game and was called "Critter Land". Congratulations!

### Alachua County Health Department Epi Team:

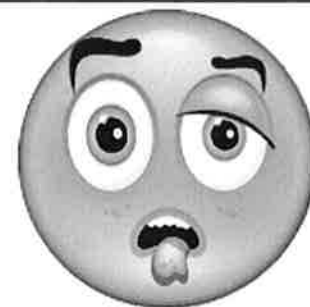
Isabel Anasco, Sheila Griffis, Amethyst Auza, Marilyn Mandell  
Dr. Reia Jaber, Carisa Boyce, Rene Morris



# Foodborne Norovirus

Becky Lazensky

Noroviruses are a common cause of gastrointestinal illnesses and outbreaks due to the high infectivity of the viruses and ease of transmission. Noroviruses are estimated to cause 5.5 million illnesses annually, comprising 58% of foodborne illness events<sup>9</sup>. The level of immunity to certain strains of *Norovirus* can reach 50% in persons over 18 years of age, which suggests the majority of us have been exposed to the virus at some point in our lives<sup>1</sup>.



The *Norovirus* genus encompasses a variety of small non-enveloped round structured viruses (SRSVs) previously referred to as Norwalk-like viruses<sup>2</sup>. Noroviruses can spread through the fecal-oral route, fomites, person-to-person contact, and indirectly through particles that have aerosolized during a vomiting or diarrhea episode. Symptoms commonly associated with *Norovirus* infections include diarrhea or vomiting, abdominal cramps, headache, fever, fatigue, and muscle aches, with a short duration in the majority of cases (average duration of 24-60 hours)<sup>1</sup>. The average incubation period ranges from 24-48 hours. Cases typically recover fully without medical intervention or hospitalization<sup>2</sup>.

Asymptomatic viral shedding may occur prior to and following the symptomatic period and can continue for 3 days following recovery. Viral shedding may continue for up to two weeks for some individuals, although it remains unclear how infectious persons are during those two weeks<sup>4</sup>. This allows persons infected with *Norovirus* to transmit the virus when they do not realize they are infectious<sup>5</sup>. Secondary household transmission is frequently reported among family members if one person in the household is infected.

The most common risk factors for contamination associated with suspected and confirmed foodborne *Norovirus* outbreaks were bare-handed contact by a food service employee (from an analysis of the Food, Water, and Vectorborne Surveillance System (FWVSS) database from 2005-2009 (n=106 outbreaks)). The second most common contamination factor was an infected person or carrier. In general, foods commonly associated with *Norovirus* infections are ready-to-eat foods such as salads and fruits<sup>1</sup>. Additionally, filter-feeding shellfish have an inherent risk when consumed raw or undercooked because they can concentrate *Norovirus*<sup>3</sup>.

When investigating a *Norovirus* case associated with a restaurant, it is important to review the company's sick leave policy with management. Food service employees should refrain from working while ill and for a minimum of 72 hours after their symptoms resolve and take preventive measures such as practicing good hand washing and wearing gloves to avoid contaminating food items. Good personal hygiene practices are critical in conjunction with staying home from work while infectious.

Since a standardized method for detecting *Norovirus* in food samples is not widely available in Florida, stool testing is the standard method for confirming the virus. Contact your Regional Environmental Epidemiologist when foodborne or waterborne *Norovirus* transmission is suspected and your Regional Epidemiologist when person-to-person spread is suspected. To get more information on *Norovirus*, please visit the Florida DOH Food and Waterborne Disease Program's new *Norovirus* resource webpage at: <http://www.doh.state.fl.us/Environment/medicine/foodsurveillance/norovirus.htm> which contains a number of useful web materials that will be helpful to CHDs when they conduct outbreak investigations<sup>6</sup>.

## References:

1. Food and Drug Administration: <http://www.fda.gov/Food/FoodSafety/Foodbornellness/FoodbornellnessFoodbornePathogensNaturalToxins/BadBugBook/ucm071344.htm>

2. University of Florida: <http://edis.ifas.ufl.edu/fs129>

3. M. Koopmans, E. Duizer. Foodborne Viruses: An Emerging Problem. *International Journal of Food Microbiology* 90(2004) 23-41.

Continued from page 3

4. CDC: <http://www.cdc.gov/ncidod/dvrd/revb/gastro/norovirus-foodhandlers.htm>

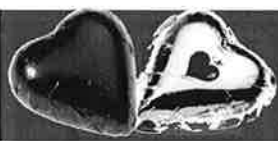
5. *Noroviruses - Challenges to Control* Raphael Dolin, M.D. *N Engl J Med* 2007; 357:1072-1073 September 13, 2007 <http://www.nejm.org/doi/full/10.1056/NEJMp078050>

6. Florida Department of Health Food and Waterborne Disease Program: <http://www.doh.state.fl.us/Environment/medicine/foodsurveilliance/norovirus.htm>

7. T. J. Doyle, I. Stark, R. Hammond, R. S. Hopkins. *Outbreaks of Noroviral Gastroenteritis in Florida, 2006–2007. Epidemiol. Infect.* (2009), 137, 617–625.

8. CDC Yellow Book: *Norovirus*: <http://wwwnc.cdc.gov/travel/yellowbook/2010/chapter-5/norovirus.aspx>

9. Scallan E, Hoekstra RM, Angulo FJ, Tauxe RV, Widdowson M-A, Roy SL, et al. *Foodborne illness acquired in the United States—major pathogens. Emerg Infect Dis.* 2011 Jan; [Epub ahead of print] <http://www.cdc.gov/eid/content/17/1/pdfs/09-1101p1.pdf>



## Oysters and Clams for Two

### Ingredients

- Olive oil, for frying
- 2 cups buttermilk
- 2 cups Italian-style bread-crumbs
- 1/2 pound, small, shucked clams, about 20 to 25
- 1/2 pound, small, shucked oysters, about 8 to 10
- 1 lemon, cut in 1/2
- Sea salt
- 1 1/2 cups marinara or arrabiata sauce (store bought or homemade), warmed
- 1/4 teaspoon red pepper flakes, optional, if using marinara (not arrabiata) sauce

### Directions

Pour enough olive oil into a large, deep, heavy frying pan to reach a depth of 3 inches. Heat the oil over medium heat until a deep-fry thermometer registers 350 degrees F.

While the oil is heating, put the buttermilk and the bread crumbs in separate shallow bowls. Working in batches, dip clams and oysters in buttermilk to coat completely. Allow the excess buttermilk to drip back in to the bowl. Dredge clams and oysters in the bread crumbs. Place the clams and oysters on a baking sheet, and continue.

When the oil is hot, fry the clams and oysters in batches, about 3 minutes per batch. Using a slotted spoon, transfer the fried seafood to paper towels to drain.

Immediately sprinkle the fried seafood with freshly squeezed lemon and sea salt. Serve with a bowl of warmed spicy marinara or arrabiata sauce for dipping.

Thanks to the Food Network [www.foodnetwork.com](http://www.foodnetwork.com).

Remember to use caution while working with hot oil. Don't forget to wash your hands and disinfect any kitchen surfaces that come into contact with raw animal proteins. Promptly refrigerate leftovers. For more information on food safety, check out [www.foodsafety.gov](http://www.foodsafety.gov).



# Web Corner Ryan Lowe

The Food and Waterborne Disease Program website is a one-stop shop for all things food and waterborne. County health department staff and the general public can learn about the program and staff, view upcoming trainings, obtain investigative tools, report foodborne illness complaints, learn about recently recalled food products, view annual reports, and find links to additional food and waterborne resources. Several new investigative tools and surveillance features were recently added to the webpage. Some notable additions include:

- Foodborne Illness Online Complaint Form
- Food Recalls Page
- Environmental Health Assessment Report
- Food Worker Interview Form
- Food Preparation Review Worksheet
- Food Worker Exclusion Guidelines
- Guidelines for Collection and Submission of Food Samples
- Guidelines for Determination of a Joint Investigation

During the winter months, *Norovirus* becomes an increasing concern throughout the U.S.. The Food and Waterborne Disease Program developed a webpage devoted to investigative tools and resources related to controlling *Norovirus* outbreaks to assist local county health department staff and the public. To learn more about the Food and Waterborne Disease Program as well as view the available tools and features, please visit

[www.foodandwaterdisease.com](http://www.foodandwaterdisease.com)

## The Food and Waterborne Disease Team

Want to be part of a winning team? We are currently seeking a qualified individual to fill the position of Regional Environmental Epidemiologist for the North Central Region. Click [here](#) to apply online.

### Food and Waterborne Disease Program

Statewide Coordinator,  
Tiffiani Onifade, M.S., Ph.D.: (850) 245-4116  
Preparedness Coordinator,  
Michael Wydotis: (850) 245-4127

#### Regional Environmental Epidemiologists

	Rick Hutchinson:	(850) 245-4444 x2928
	Becky Lazensky:	(352) 955-1900
	Kathleen Van Zile:	(904) 791-1596
	Dean Bodager:	(407) 245-0468
	Mike Friedman:	(727) 816-1240
	Robin Terzagian:	(239) 338-2744
	Janet Wamnes:	(772) 467-4124
	Ryan Lowe:	(954) 213-0792
	Juan Suarez:	(305) 470-6822



We want to hear from you! If you have a fascinating foodborne or waterborne disease case study, a particularly informative outbreak investigation narrative, or suggestions for the content of Food for Thought, don't delay! E-mail us right away! Contact e-bulletin Chief Editor Sandy Lyda at [Sandy\\_Lyda@doh.state.fl.us](mailto:Sandy_Lyda@doh.state.fl.us).