

EPI—NOTES



Hillsborough County Health Department

Disease Surveillance Newsletter



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COMMUNITY ACQUIRED CLOSTRIDIUM DIFFICILE – ASSOCIATED DISEASE

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Nationally, and in the state of Florida, *Clostridium difficile* has gained attention as the frequency, severity, and associated mortality of *C. difficile*-associated disease (CDAD) has increased. The increased rates and/or severity of disease may be caused by changes in antibiotic use, changes in infection control practices, or the emergence of a new strain of *C. difficile* with increased virulence and/or antimicrobial resistance (Reference--www.cdc.gov). While not on the reportable disease list for individual cases, any clustering or outbreak of *C. difficile* should be reported to your local county health department.

C. difficile is a major cause of antibiotic-associated diarrhea in hospital settings, both in the developed and the developing world. There is a spectrum of toxin-mediated disease from mild diarrhea to fatal dysentery with pseudomembranous colitis. CDAD has been almost exclusively a complication of previous antibiotic therapy, particularly with clindamycin and third-generation cephalosporins, which deplete the bowel of competing gram-negative flora. Some apparently community-acquired cases are also linked to previous hospital visits.

Because CDAD tends to be overlooked, routine testing for toxins should be considered not only in nosocomial gastrointestinal infections but also in community-acquired gastrointestinal infections in the elderly with multiple or severe underlying diseases. Toxin testing is a good indicator of disease in symptomatic patients however false negatives have been reported. The established treatment is metronidazole and vancomycin. Treatment is indicated for individuals with disease (i.e., treatment is not indicated for asymptomatic patients).

In 2005 the Pennsylvania Department of Health and the CDC published a description of 33 cases of serious CDAD in otherwise healthy patients with minimal or no exposure to health care. The organism appeared among healthy persons living in the community and in peripartum women, two populations previously thought to be at low risk. There were 10 peripartum cases and 23 CDAD cases in Pennsylvania, New Hampshire, New Jersey, and Ohio. Eight of 33 cases (24%) had no exposure to antibiotics within 3 months before infection. Other cases appeared in Quebec. It may be more virulent strains that are causing outbreaks in persons at low risk – i.e. those not hospitalized and without antimicrobial use. These findings underscore the importance of maintaining a high index of suspicion for CDAD, and the need for surveillance to better understand its changing epidemiology.

For the investigation above, the case definition for a confirmed case of CDAD was established as any adult or child with each of the following:

- Diarrhea
- No serious underlying illness (e.g., severe chronic liver or kidney disease)
- No overnight stay in a health-care facility for \geq 3 months before diarrhea onset
- Evidence of CDAD by any of the following:
 - positive assay for *C. difficile* toxin
 - chronic histopathology characteristic of *C. difficile* infection
 - pseudomembranous colitis observed on lower gastrointestinal endoscopy
 - positive stool culture for *C. difficile*

A confirmed case of peripartum CDAD | appearing within 4 weeks of delivery.
 was defined by the same criteria

COMMUNITY ACQUIRED CLOSTRIDIUM DIFFICILE – ASSOCIATED DISEASE (continued)

For additional information on the investigation above, read <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5447a1.htm>.

Infection control to prevent spread of *C. difficile* in healthcare settings is critical. Healthcare facilities should monitor the number of *C. difficile*-associated disease cases and, especially if rates at the facility increase, the severity of disease and patient outcomes. If an increase in rates or severity is observed, healthcare facilities should reassess compliance with the recommended infection control measures for known cases of *C. difficile*-associated disease including the following:

- o Perform hand hygiene using an alcohol-based hand rub or soap and water
 - o If your institution experiences an outbreak consider using only soap and water for hand hygiene when caring for patients with *C. difficile*-associated disease; alcohol-based hand rubs may not be as effective against spore-forming bacteria
- o Contact precautions
- o Environmental cleaning and disinfecting strategies.

If compliance is optimal, yet rates or disease severity continues to increase, review antimicrobial use to determine whether particular antimicrobials are associated with cases of *C. difficile*-associated disease. If assistance is needed with these measures, additional help should be sought from local or state health departments and/or local infection control experts. Reference-- http://www.cdc.gov/ncidod/dhqp/id_Cdiff.html

**HILLSBOROUGH COUNTY HEALTH DEPARTMENT
 Data Summary Report**

DISEASE	2003 Yr end	2004 Yr end	2005 Yr end	3YR AVG (2002-2004)	Jan- Jan 05	Jan-Jan 06
AIDS	194	377	346	305.7	32	44
ANIMAL BITE, PROPHY REC.	24	17	30	23.7	0	0
ANTHRAX	0	0	0	0.0	0	0
BOTULISM	0	1	0	0.3	0	0
BRUCELLOSIS	0	2	0	0.7	0	0
CAMPYLOBACTERIOSIS	72	59	45	58.7	2	1
CHLAMYDIA	3,071	2,964	3,208	3,081.0	254	270
CIGUATERA	0	0	0	0.0	0	0
CREUTZFELDT-JAKOB DISEASE	0	2	0	0.7	0	0
CRYPTOSPORIDIOSIS	7	13	32	17.3	1	1
CYCLOSPORIASIS	0	0	40	13.3	0	0
DENGUE	0	1	3	1.3	0	0
DIPHTHERIA	0	0	0	0.0	0	0
EHRlichiosis, HUMAN GRANULOCYtic	1	0	0	0.3	0	0
EHRlichiosis, HUMAN MONOCYtic	0	0	0	0.0	0	0
ENCEPHALITIS, CALIFORNIA/LACROSSE	0	1	0	0.3	0	0
ENCEPHALITIS, HERPES	0	1	1	0.7	0	0
ENCEPHALITIS, NON-ARBOVIRAL	0	0	0	0.0	0	0
ENCEPHALITIS, OTHER	0	0	0	0.0	0	0
ENCEPHALITIS, EEE	0	0	0	0.0	0	0
ENCEPHALITIS, SLE	0	0	0	0.0	0	0

ENCEPHALITIS, WN	0	3	0	1.0	0	0
ESCHERICHIA COLI (E. COLI) O157:H7	2	4	6	4.0	0	0
E. COLI SHIGA TOXIN + NON-O157	0	0	0	0.0	0	0
DISEASE	2003 Yr end	2004 Yr end	2005 Yr end	3YR AVG (2002-2004)	Jan- Jan 05	Jan-Jan 06
E. COLI, OTHER	0	0	0	0.0	0	0
FOOD AND WATERBORNE CASES	163	210	114	162.3	3	7
FOOD AND WATERBORNE OUTBREAKS	33	22	9	21.3	1	2
GIARDIASIS	71	62	64	65.7	5	6
GONORRHEA	1,643	1,197	1,261	1,367.0	102	115
H. INFLUENZAE PNEUMONIA	1	3	5	3.0	0	0
H-FLU, PRIMARY BACTEREMIA	2	3	4	3.0	0	0
HANSEN'S DISEASE (LEPROSY)	1	0	0	0.3	0	0
HANTAVIRUS	0	0	0	0.0	0	0
HEMOLYTIC UREMIC SYNDROME	0	0	1	0.3	0	0
HEPATITIS A, ACUTE	40	27	14	27.0	1	2
HEPATITIS B, ACUTE	76	60	41	59.0	1	3
HEPATITIS B, MATERNAL (HBsAg+ Pregnant)	43	42	41	42.0	2	0
HEPATITIS B, PERINATAL ACUTE	0	0	0	0.0	0	0
HEPATITIS B, CHRONIC*	234	203	145	194.0	14	0
HEPATITIS C, ACUTE	10	9	3	7.3	0	0
HEPATITIS C, CHRONIC*	479	1,184	827	830.0	32	32
HEPATITIS NON-A NON-B, ACUTE	0	0	1	0.3	0	0
HEPATITIS UNSPEC, ACUTE	1	0	1	0.7	0	0
HIV INFECTION	363	366	332	353.7	30	35
LEAD POISONING	49	37	29	38.3	4	0
LEGIONELLOSIS	12	10	9	10.3	1	0
LEPTOSPIROSIS	0	0	0	0.0	0	0
LISTERIOSIS	2	0	1	1.0	0	0
LYME DISEASE	3	1	7	3.7	0	0
MALARIA	4	5	9	6.0	0	1
MEASLES	0	1	0	0.3	0	0
MENINGITIS, GROUP B STREP	2	3	4	3.0	0	0
MENINGITIS, H-FLU	1	4	1	2.0	0	0
MENINGITIS, LISTERIA MONO	0	0	0	0.0	0	0
MENINGITIS, OTHER	14	15	15	14.7	0	0
MENINGITIS, S PNEUMO	7	7	6	6.7	2	1
MENINGOCOCCAL DISEASE	3	4	4	3.7	0	0
MERCURY POISONING	0	0	0	0.0	0	0
MUMPS	3	1	2	2.0	0	0
PERTUSSIS	4	3	34	13.7	2	7
PESTICIDE RELATED ILLNESS	0	0	0	0.0	0	0

POLIO, PARALYTIC	0	0	0	0.0	0	0
PSITTACOSIS	0	1	0	0.3	0	0
Q FEVER	1	0	0	0.3	0	0
DISEASE	2003 Yr end	2004 Yr end	2005 Yr end	3YR AVG (2002-2004)	Jan- Jan 05	Jan-Jan 06
RABIES ANIMAL	11	9	7	9.0	1	0
ROCKY MOUNTAIN SPOTTED FEVER	1	1	0	0.7	0	0
RUBELLA	0	0	0	0.0	0	0
SALMONELLOSIS	263	233	299	265.0	7	9
SHIGELLOSIS	31	49	251	110.3	0	13
SMALLPOX	0	0	0	0.0	0	0
STAPH AUREUS VISA/VRSA	0	0	0	0.0	0	0
STREP DISEASE, INVASIVE GROUP A	11	18	7	12.0	0	0
STREP PNEUMO, INVASIVE DRUG RESIST	59	50	46	51.7	7	7
STREP PNEUMO, INVASIVE SUSCEPTIBLE**	14	39	35	29.3	3	2
SYPHILIS, CONGENITAL	3	1	0	1.3	0	0
SYPHILIS, INFECTIOUS	43	47	41	43.7	3	0
TETANUS	0	0	0	0.0	0	0
TOXOPLASMOSIS	3	2	0	1.7	0	0
TUBERCULOSIS	77	73	51	67.0	4	4
TYPHOID FEVER	0	2	1	1.0	0	0
VIBRIO ALGINOLYTICUS	0	3	1	1.3	0	0
VIBRIO CHOLERA NON-01	0	0	0	0.0	0	0
VIBRIO HOLLISAE	0	0	0	0.0	0	0
VIBRIO PARAHAEMOLYTICUS	2	0	2	1.3	1	0
VIBRIO VULNIFICUS	5	5	2	4.0	0	0
VIBRIO, OTHER	0	0	0	0.0	0	0
WEST NILE FEVER	1	0	0	0.3	0	0
YELLOW FEVER	0	0	0	0.0	0	0

Data contained in this report are provisional

NA=NOT AVAILABLE NR=NOT REPORTABLE

**Added
Sept. 2003

*Data collection began October 2002

Epi-Notes is a free newsletter produced by the Hillsborough County Health Department disease control programs to provide local information and promote disease reporting. **Please share this information with interested health care providers.** To add or remove your name from the Epi-Notes list please email your request to dawn_morgan@doh.state.fl.us or fax to 813-276-2981. We welcome your comments. The editorial staff consists of Dr. Albert Vincent, Michael Kilcomons, Eliot Gregos, David Atrubin, Xiomara Hewitt-Jeffrey, and Jylmarie Kintz. The Hillsborough County Health Department, Epidemiology Program, distributes Epi-Notes, 1105 E. Kennedy Blvd, PO Box 5135, Tampa, FL 33675-5135. Phone: 813-307-8010, Fax: 813-276-2981, Web: www.hillscountyhealth.org, Email: dawn_morgan@doh.state.fl.us.