FoodNet Active Manuscripts

Status	#	Lead	Coauthors	Title	Journal	Updated	Comment
9							
	461	Jones, Timothy F.	Scallan, Elaine, Angulo, Fredrick J.	FoodNet: Overview of a Decade of Achievement	Foodborne Pathogens and Disease	6/29/2007	
	121	Samuel, Michael C.	Vugia, Duc J., Koehler, Kathleen M., Marcus, Ruthanne, Deneen, Valerie C., Damaske, Barbara, Shiferaw, Beletshachew, Hadler, James L., Henao, Olga L., Angulo, Fredrick J.	Consumption of Risky Foods Among Adults at High Risk for Severe Foodborne Diseases: Room for Improved Targeted Prevention Messages	Journal of Food Safety	6/29/2007	Journal of Food Safety
	465	Scallan, Elaine		Activities, Achievements, and Lessons Learned During the First 10 Years of FoodNet	CID	6/29/2007	Published - March publication
	113	Varma, Jay K.	Samuel, Michael C., Marcus, Ruthanne, Hoekstra, Robert M., Medus, Carlota, Segler, Suzanne D., Anderson, Bridget J., Jones, Timothy F., Shiferaw, Beletshachew, Haubert, Nicole, Megginson, Melanie, McCarthy, Patrick V., Graves, Lewis M., Van Gilder, Thomas J., Angulo, Fredrick J.	Listeria Monocytogenes Infection From Food in the Regulatory Era: A Case-Control Study of Risk Factors for Sporadic Illness in the United States	CID	6/29/2007	Published Jan. 2007
	107	Voetsch, Andrew C.	Angulo, Fredrick J., Jones, Timothy F., Moore, Matthew R., Nadon, Celine, McCarthy, Patrick V., Shiferaw, Beletshachew, Megginson, Melanie, Hurd, Sharon, Anderson, Bridget J., Cronquist, Alicia B., Vugia, Duc J., Medus, Carlota, Segler, Suzanne D., Graves, Lewis M., Hoekstra, Robert M., Griffin, Patricia M., EIP FoodNet Working Group	Reduction in the Incidence of Invasive Listeriosis in the FoodNet Sites, 1996-2003	CID	6/29/2007	Published Jan. 2007
8							
	394	Nelson, Jennifer M.	Nadle, Joelle, Daniels, Allison, Clogher, Paula, Gillespie, Jennifer, Furuno, Jon P., Plantenga, Melissa, Bernarczyk, Robert, Ingram, Amanda	FoodNet Survey of Food Use and Practices in Long-Term Care Facilities		7/10/2007	Accepted at Journal of Food Protection

0=proposal, 1=analysis, 2=writing, 3=draft being reviewed by coauthors, 4=incorp coauthor comments, 5=NCID/CDC clearance, 6= incorp NCID/CDC comments, 7=at journal, 8=in press, 9=published, 10=posted to website

Status	#	Lead	Coauthors	Title	Journal	Updated	Comment
	117	Patrick, Mary	Griffin, Patricia M., Mead, Paul S., Voetsch, Andrew C.	The Effectiveness of Recall Notification: Community Response to a Nationwide Recall of Hot Dogs and Deli Meats		6/29/2007	Accepted to Journal of Food Protection
7							
	363	Hassan,Valley	Kirk, Martyn D., Scallan, Elaine, Angulo, Fredrick J., Hall, Gillian,	Reporting Rates of Campylobacter Infections in Australia and the United States - Exploring Reasons for the Difference		7/10/2007	
	325	Shiferaw, Beletshachew		Comparison of Three Surveillance Systems for Hemolytic Uremic Syndrome in Oregon		6/29/2007	Submitted to AJPH.
5							
	22	Crump, John A.	Crump, John A., Joyce, Kevin W., Vugia, Duc J., Megginson, Melanie, Segler, Suzanne D., Hurd, Sharon, Luedeman, Jeff, Shiferaw, Beletshachew, Hanna, Samir S., Stevenson, Jennifer E., Angulo, Fredrick J.	Clinical Consequences of Typhoid Fever due to Salmonella Typhi with Decreased Susceptibility to Ciprofloxacin		6/29/2007	
	381	Demma, Linda	Vugia, Duc J., Hurd, Sharon, Segler, Suzanne D., Kielbauch, Julie, Leano, Fe, Dumas, Nellie B., Hatch, Julie, Hanna, Samir S., Angulo, Fredrick J.,	Campylobacter species in FoodNet and NARMS 1997-2004: is the incidence of Campylobacter coli infection increasing?		6/29/2007	
	124	Dunne, Eileen F.	Griffin, Patricia M., Henao, Olga L., Bender, Jeffrey B., Beletshachew, Shiferaw, Vugia, Duc J., Dembek, Zygmunt F., Wesolowski, Laura G., Carter, Michael A., Zansky, Shelley M., Boothe, Effie J., Burnite, Steve, Wells, Joy G., Bibb, William, Mead, Paul S., Henao, Olga L., EIP FoodNet Working Group, Snider, Cynthia J.	Pediatric Hemolytic Uremic Syndrome in the United States, 1997-2002: A Study of 379 Cases		7/10/2007	
	508	Haley, Clinton C.	Hedberg, Katrina, Cieslak, Paul R., Scallan, Elaine, Ong, Kanyin Liane, Marcus, Ruthanne, Shin, Sam, Cronquist, Alicia B., Gillespie, Jennifer, Jones, Timothy F., Shiferaw, Beletshachew, Fuller, Candace, Edge, Karen, Anderson, Bridget J., Ryan, Patricia A., Mintz, Eric D.	Sporadic Shigellosis: Population-Based Risk Factors Revealed, FoodNet, 2005		6/29/2007	

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Status	#	Lead	Coauthors	Title	Journal	Updated	Comment
	26	Majowicz, Shannon E.	Scallan, Elaine, Hall, Gillian, Banerjee, Anyana, Kirk, Martyn D., Angulo, Fredrick J.	Respiratory Symptoms Among Persons with Gastrointestinal Illness		6/29/2007	
	459	Voetsch, Andrew C.	Poole, Charles, Hedberg, Craig W., Ryder, Robert W., Weber, David J., Angulo, Fredrick J.	The effect of alternative control selection in the FoodNet case-control study of sporadic Salmonella serotype Enteritidis using other serotypes as a comparison group		7/10/2007	
4							
	432	Maldonado, George		Blending Project		7/10/2007	
	341	Rosenblum, Ida E.	Lynch, Michael, Cronquist, Alicia B., Phan, Quyen, Vugia, Duc J., Burnett, Cindy, Morse, Dale L., Keene, William E., Edwards, Leslie, Swanson, Ellen, Jones, Timothy F., EIP FoodNet Working Group,	Factors Associated with Confirming an Etiology During Foodborne Outbreak Investigations, FoodNet Sites, 2001-2006		8/6/2007	
3							
	103	Ailes, Elizabeth	Demma, Linda, Scallan, Elaine	Continued Decline in the Incidence of Campylobacter Infections, FoodNet 1996-2006		7/10/2007	
	109	Demma, Linda	Snider, Cynthia J., Shiferaw, Beletshachew, Vugia, Duc J., Hurd, Sharon, Zansky, Shelley M., Scheftel, Joni, Voetsch, Andrew C., Angulo, Fredrick J., Griffin, Patricia M., EIP FoodNet Working Group	Risk Factors for Developing Hemolytic Uremic Syndrome or Death Among Persons with Escherchia coli O157 Infection, FoodNet sites, 1997-2002			
	491	Guo, Chuanfa	Hartnett, Emma, Harman, Jane, Ong, Kanyin Liane, Naugle, Alecia L., Bennett, Patricia, Hoekstra, Robert M., Cieslak, Paul R., Holt, Kristen G., Schlosser, Wayne D., Rose, Bonnie E., Schroeder, Carl M., Scallan, Elaine, Angulo, Fredrick J.	Human Infections from Salmonella in Meat, Poultry, and Eggs, United States, 1998 - 2003: Estimates from a Bayesian Model		7/10/2007	
	331	Long, Cherie	Hayes, Tameka, Vugia, Duc J., Ryan, Patricia A., Scheftel, Joni, Shiferaw, Beletshachew, Jones, Timothy F., Demma, Linda, EIP FoodNet Working Group	Yersenia pseudotuberculosis infections in FoodNet, 1996-2005		6/29/2007	
	343	Sharp, Lydia	Tobin-D'Angelo, Melissa, Shuler, Carrie, Voetsch, Andrew C.	Sporadic Salmonella serotype Javiana in Georgia: An Emerging Zoonotic Disease?		6/29/2007	

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Status	#	Lead	Coauthors	Title	Journal	Updated	Comment
2							
	462	Gould, Hannah	Demma, Linda, Hoekstra, Robert M., Angulo, Fredrick J.	Higher Incidence of Escherichia coli O157:H7 Infection in Rural Counties and Possible Association with Animal Contact		8/6/2007	
	565	Henao, Olga L.	Moyer, Laura B., Hoefer, Dina, Holman, Robert, Jones, Timothy F., Marcus, Ruthanne, Medus, Carlota, Ryan, Patricia A., Tobin-D'Angelo, Melissa	Hospitalizations Due to Infections of Selected Foodborne Pathogens; NIS, NHDS, and FoodNet, 1998-2004		7/31/2007	
	344	Henao, Olga L.	Ryan, Patricia A., Scallan, Elaine, Choudhuri, Julie, Norton, Dawn M., Edge, Karen, Ryan, Patricia A., Tobin-D'Angelo, Melissa, Nelson, Jennifer M., Hanna, Samir S., Jones, Timothy F., Angulo, Fredrick J., EIP FoodNet Working Group	Proportion of Visits to Health Care Providers Resulting in Request of Stool Samples: Data from the National Ambulatory Medical Care Survey (NAMCS) and the Foodborne Diseases Active Surveillance Network (FoodNet) Population Survey		6/29/2007	
	386	Hurd, Sharon	Demma, Linda, Tong, Xin, Cronquist, Alicia B., Segler, Suzanne D., Kielbauch, Julie, Swanson Laine, Ellen, Smith, Glenda, Hatch, Julie, Hanna, Samir S., Fitzgerald, Collette, EIP FoodNet Working Group, Shin, Sam	Clinical Laboratory Practices for the Identification of Campylobacter in FoodNet Sites: Do Differences Explain Variation in Incidence Rates?		6/29/2007	
	101	Scallan, Elaine	Vugia, Duc J., Cronquist, Alicia B., Marcus, Ruthanne, Thomas, Stephanie M., Blythe, David, Fuller, Candace, Zansky, Shelley M., Cieslak, Paul R., Jones, Timothy F.	Burden of Bacterial Foodborne Illness in the United States		7/10/2007	

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Campylobacter Linkage and Accuracy Results by Species
FoodNet and NARMS, 1997-2004

Species result in NARMS	# Linked (isolates with speciation results in FoodNet data and NARMS)	% Match
C. jejuni	1,135	99
C. coli	52	56
C. fetus	2	0
C. upsaliensis	1	100

NARMS isolates speciated at CDC; FoodNet data speciated at site

FoodNet 2006-2007 Population Survey (5th cycle)

Summary of current activities:

- Survey completed in May 2007
- 17,088 completed interviews
- Final dataset to CDC in August
- CDC to review and distribute state datasets during August-September 2007
- Pop Survey WG will resume conference calls – please email Laura Moyer (fxv4@cdc.gov) if you would like to join the group
- **Will resume conference calls on Thursday, August 30th, 3:00pm (EST)**

Current working groups members:

Janice Adams-King, FSIS/USDA
Alicia Cronquist, CO
Amy Lando, FDA
Fred Angulo, CDC
Beletshachew Shiferaw, OR
Bill Keene, OR
Candace Fuller, MN
Carlota Medus, MN
Catherine Rebmann, CDC
Dawn Norton, CA
Dina Hoefer, NY
Laura Green, CDC
Mike Hoekstra, CDC
Janet Mohle-Boetani, CA
Karen Edge, NM
Michael Lynch, CDC
Marcy McMillian, TN
Melissa Tobin-D'Angelo, GA
Olga Henao, CDC
Patricia Ryan, MD
Patrick McCarthy, FDA
Mary Patrick, CDC
Paul Frenzen, USDA
Ruthanne Marcus, CT
Elaine Scallan, CDC
Stephy Thomas, GA
Tim Jones, TN

non-Typhi *Salmonella* Clinical Outcomes Cohort Study Status

2006

State	Sampling Scheme	Study Start Date	FoodNet Cases	Eligible	Interviewed (% of eligible)	Pending (% of eligible)	Refused (% of eligible)	Other Not Enrolled (% of eligible)
CA	1/10	1/1/2006	473	52	31 (60%)	0 (0%)	5 (10%)	16 (31%)
CO	1/4	1/1/2006	352	87	64 (74%)	0 (0%)	17 (20%)	6 (7%)
CT	1/4	1/1/2006	502	109	98 (90%)	0 (0%)	9 (8%)	2 (2%)
GA	1/20	3/15/2006	1545	76	44 (58%)	0 (0%)	2 (3%)	30 (39%)
MD	1/10	5/1/2006	618	68	50 (74%)	0 (0%)	5 (7%)	13 (19%)
MN	1/5	1/1/2006	720	142	114 (80%)	2 (1%)	13 (9%)	13 (9%)
NM	1/5	1/1/2006	258	45	27 (60%)	0 (0%)	5 (11%)	13 (29%)
NY	1/5	1/1/2006	492	96	57 (59%)	0 (0%)	14 (15%)	25 (26%)
OR	1/20	1/1/2006	397	25	20 (80%)	0 (0%)	3 (12%)	2 (8%)
TN	1/10	1/1/2006	785	76	65 (86%)	0 (0%)	4 (5%)	7 (9%)
		Total	6142	776	570 (73%)	2 (0%)	77 (10%)	127 (16%)

2007

State	Sampling Scheme	Study Start Date	FoodNet Cases	Eligible	Interviewed (% of eligible)	Pending (% of eligible)	Refused (% of eligible)	Other Not Enrolled (% of eligible)
CA	1/10	1/1/2006	146	27	13 (48%)	4 (15%)	5 (19%)	5 (19%)
CO	1/10	1/1/2006	130	15	11 (73%)	3 (20%)	1 (7%)	0 (0%)
CT	1/20	1/1/2006	150	13	12 (92%)	0 (0%)	0 (0%)	1 (8%)
GA	1/20	3/15/2006	483	66	36 (55%)	15 (23%)	4 (6%)	11 (17%)
MD*	1/10	5/1/2006	193	24	11 (46%)	5 (21%)	2 (8%)	6 (25%)
MN	1/20	1/1/2006	273	20	12 (60%)	4 (20%)	1 (5%)	3 (15%)
NM	1/5	1/1/2006	77	22	8 (36%)	3 (14%)	4 (18%)	7 (32%)
NY	1/5	1/1/2006	218	49	23 (47%)	9 (18%)	9 (18%)	8 (16%)
OR	1/10	1/1/2006	114	18	11 (61%)	1 (6%)	3 (17%)	3 (17%)
TN	1/10	1/1/2006	232	32	26 (81%)	0 (0%)	0 (0%)	6 (19%)
		Total	2016	286	163 (57%)	44 (15%)	29 (10%)	50 (17%)

8/5/2007

*Last updated 6/28/07.

E. *coli* O157 Cohort Study Status

State	Study Start Date	FoodNet Cases	Eligible	Interviewed (% of eligible)	Pending (% of eligible)	Refused (% of eligible)	Other Not Enrolled (% of eligible)
CA	3/1/2006	57	60	43 (72%)	2 (3%)	7 (12%)	8 (13%)
CO	2/1/2006	39	40	28 (70%)	1 (3%)	7 (18%)	4 (10%)
CT	6/1/2006	45	49	33 (67%)	1 (2%)	12 (24%)	3 (6%)
GA	1/22/2007	50	10	4 (40%)	1 (10%)	3 (30%)	2 (20%)
MD	5/1/2006	38	42	24 (57%)	0 (0%)	7 (17%)	11 (26%)
MN	3/1/2006	200	208	124 (60%)	19 (9%)	22 (11%)	43 (21%)
NM	6/1/2006	23	21	10 (48%)	1 (5%)	3 (14%)	7 (33%)
NY	3/1/2006	67	74	34 (46%)	5 (7%)	23 (31%)	12 (16%)
OR	3/1/2006	97	98	81 (83%)	3 (3%)	5 (5%)	9 (9%)
TN	1/1/2006	91	103	68 (66%)	2 (2%)	4 (4%)	29 (28%)
	Total	707	705	449 (64%)	35 (5%)	93 (13%)	128 (18%)

Updated 7/30/07

Enrollment Status for Selected *Salmonella* Serotypes Study, as of July 31, 2007

	S. Javiana	*S.* Infantis	*S.* I 4,[5],12:i:-	Total	Interviewed	Pending	Refused	Other Not Enrolled
	# Eligible				# (% of Eligible)			
CA*	1	4	11	16	6 (38)	6 (38)	0	4 (25)
CO	4	2	0	6	3 (50)	1 (17)	0	2 (33)
CT	1	3	8	12	9 (75)	2 (17)	0	1 (8)
GA	21	12	24	57	30 (53)	11 (19)	7 (12)	9 (16)
MD	4	0	27	31	15 (48)	6 (19)	2 (6)	8 (26)
MN	3	6	12	21	12 (57)	3 (14)	0	6 (29)
NM*	2	1	4	7	2 (29)	0	1 (14)	4 (57)
NY*	0	1	10	11	2 (18)	2 (18)	0	7 (64)
OR	1	4	12	17	9 (53)	2 (12)	4 (24)	2 (12)
TN	6	0	30	36	25 (69)	4 (11)	4 (11)	3 (8)
Total (Cases)	43	33	138	214	113 (53)	37 (17)	18 (8)	46 (21)
Controls	-	-	-	-	533	-	-	-

*Enrollment as of June 27, 2007

Enrollment Status for Validation Sub-Studies for Selected *Salmonella* Serotypes Study, as of July 31, 2007

	Selection Bias Sub-Study		Misclassification Bias Sub-Study	
	Eligible	Completed Questionnaires Received (% of eligible)	Eligible	Completed Questionnaires Received (% of eligible)
CA*	1	0	0	0
CO	1	0	0	0
CT	0	0	0	0
GA	5	5	1	0
MD	0	0	2	0
MN	3	0	0	0
NM*	1	0	0	0
NY*	0	0	0	0
OR	3	1	0	0
TN	6	1	1	0
Total (Cases)	20	7 (35)	4	0
Controls	-	35	-	6

*Enrollment as of June 27, 2007

Data Request and Proposal

Title: Travel-related infections among *Salmonella* cases in FoodNet from 2004-2006

Data source: FoodNet Surveillance

Study Team: Paul Cieslak, Elaine Scallan, Liane Ong and the FoodNet Attributions WG

Years: 2004-2006

Purpose: The purpose of this project is to better understand what proportion *Salmonella* infections are travel-related and to compare the proportion travel-related between *Salmonella* serotype.

Proposal: At the 2006 ICEID conference, a poster was presented looking at 1 year worth of domestically acquired, sporadic cases of Salmonella. Now that there are 2 additional years of data, we would like to conduct an extensive exploratory analysis on these data including year-to-year changes, seasonality, demographics, site variation and serotype impact.

Timeline: 1 year

FoodNet Steering Committee Proposal

Proposed title: Geographic Epidemiology of endemic campylobacteriosis in the United States

Proposed by: Jennifer Weisent, Barton Rohrbach and Agricola Odoi

Date submitted: July 27, 2007

Purpose: To investigate determinants of the geographical variations of campylobacteriosis risk observed in the FOODNET states.

Brief Proposal Description:
Most of the past epidemiologic studies of risk factors of Campylobacter infections in the United States have focused on the contribution of poultry, other food items and animal contact to disease risk. The role of environmental and socioeconomic factors in the epidemiology of the disease remains poorly defined. It is not known what role socioeconomic factors such as income, education, race, ethnicity and migration status play in explaining the geographical variations in disease risk. Although Campylobacter infections have also been associated with exposure to, or consumption of untreated water [1-3], it is yet unclear what proportion of cases may be attributed to this risk factor in different regions of the US. Additionally, higher risk of infections have been associated with rural and agrarian areas [4-8], yet little has been done to quantify the impact of specific environmental and land-use factors on disease risk in different geographical locales. Our hypothesis is that the importance of specific risk factors varies by geographical location such that a factor may be an important determinant of disease in some geographical areas and not others. Identification and quantification of these geographical differences would be critical in guiding disease control strategies. Although climatic factors such as rainfall, temperature and severe weather events have also been associated with increased risk of campylobacteriosis [1,9,10], there has been no quantitative research that have investigated the impact of these factors on the epidemiology of the disease in different geographical regions of the US. Moreover, these climatic factors are known to contribute to indirect transmission of the pathogen through animal feces and agricultural run-off or water treatment system failure [6,11,12].

Current geographical distribution of campylobacter incidence reveals a host of unexplained geographical variations (Tim Jones, personal communications). The goal of our project is to utilize Geographic Information Systems (GIS) and spatial epidemiological techniques to investigate determinants of the geographical patterns in camplylobacteriosis incidence. Through application of these geographical techniques we hope to elucidate how these variations are explained by differences in the distribution of important risk factors across geographical areas. Thus, the findings would enhance identification of important risk factors unique to specific geographical locales. The information obtained will be useful in guiding disease control strategies unique to specific geographic locations.

The proposed project will form part of the PhD thesis research work of Dr. Jennifer Weisent who will be working under the supervision of Drs. Agricola Odoi and Barton Rohrbach at the University of Tennessee, College of Veterinary Medicine. We would like to work in collaboration with staff from Centers for Disease Control and Prevention. We propose to utilize

the Foodborne Diseases Active Surveillance Network (FOODNET) and GIS to address the following specific objectives:

1. Determine if climatic factors such as temperature variation, rainfall, flooding and severe weather events are important predictors of campylobacteriosis risk in the U.S.

2. Investigate potential associations between geographical variations in the risk of campylobacteriosis and:
    a. socioeconomic status
    b. rural verses urban status

3. Assess if some of the geographical variations in risk of Campylobacter infections are attributable to:
    a. variations in drinking water quality
    b. land use factors such as livestock density and agricultural practice

References

1. Clark, CG, et al. "Characterization of Waterborne Outbreak-Associated Campylobacter Jejuni, Walkerton, Ontario." Emerg Infect Dis 9.10 (2003): 1232-41.
2. Schonberg-Norio, D., et al. "Swimming and Campylobacter Infections." Emerg Infect Dis 10.8 (2004): 1474-7.
3. Nylen, G, et al. "The Seasonal Distribution of Campylobacter Infection in Nine European Countries and New Zealand." Epidemiol Infect 128.3 (2002): 383-90.
4. Potter, RC, JB Kaneene, and WN Hall. "Risk Factors for Sporadic Campylobacter Jejuni Infections in Rural Michigan: A Prospective Case-Control Study." Am J Public Health 93.12 (2003): 2118-23.
5. Green, CG, D Krause, and J Wylie. "Spatial Analysis of Campylobacter Infection in the Canadian Province of Manitoba." Int J Health Geogr 5.1 (2006): 2.
6. Nygard, K. et al. “Association between environmental risk factors and campylobacter infections in Sweden.” Epidemiol. Infect. 132 (2004): 317-325.
7. Stanley, K, and K Jones. "Cattle and Sheep Farms as Reservoirs of Campylobacter." J Appl Microbiol 94 Suppl (2003): 104S-13S.
8. Devane, ML, et al. "The Occurrence of Campylobacter Subtypes in Environmental Reservoirs and Potential Transmission Routes." J Appl Microbiol 98.4 (2005): 980-90.
9. Kuusi, M, et al. "A Large Outbreak of Campylobacteriosis Associated with a Municipal Water Supply in Finland." Epidemiol Infect 133.4 (2005): 593-601.
10. Richardson, JF, et al. "Coinfection with Campylobacter Species: An Epidemiological Problem?" J Appl Microbiol 91.2 (2001): 206-11.
11. Brown, PE, et al. "Frequency and Spatial Distribution of Environmental Campylobacter Spp." Appl Environ Microbiol 70.11 (2004): 6501-11.
12. Jones, K, S Howard, and JS Wallace. "Intermittent Shedding of Thermophilic Campylobacters by Sheep at Pasture." J Appl Microbiol 86.3 (1999): 531-6.

Title: Hemolytic Uremic Syndrome Surveillance: Use of Hospital Discharge Data to Supplement Case Finding

Data source: FoodNet HUS Surveillance database

FoodNet Lead Author: Liane Ong

Years: 2000-2005

Purpose: This manuscript will expand on the 2005 ICEID presentation of the impact of hospital discharge data review in FoodNet HUS surveillance. Data from the eight sites who conduct pediatric hospital discharge data review will be used. We will demonstrate that hospital discharge data is a necessary tool to conduct population based surveillance.

Seeking co-authors from sites

Attachment: 2005 ICEID Abstract
Hemolytic Uremic Syndrome surveillance in FoodNet: supplemental active surveillance to monitor HUS trends

Hemolytic Uremic Syndrome surveillance in FoodNet: supplemental active surveillance to monitor HUS trends

Kanyin L. Ong, MPH[1], Mirasol Apostol, MPH[3], Steven Burnite, MSPH[5], Sharon Hurd, MPH [4], Tameka Hayes, MPH[2], Stephanie Mickelson, MHS [6], Joni Scheftel, DVM MPH ACVPM [7], Nancy Spina, MPH[8], Beletshachew Shiferaw, MD[9], Effie Boothe MSN, RN [10], Linda Demma, PhD[1], and the FoodNet EIP Working Group

[1]CDC, Atlanta GA, [2] Georgia Division of Public Health, Atlanta GA, [3]California EIP, Oakland CA, [4]Connecticut EIP, New Haven CT, [5]Colorado Dept of Public Health and Environment, Denver CO, [6]Maryland Dept of Health and Mental Hygiene, Baltimore MD, [7]Minnesota Dept of Health, Minneapolis MN, [8]New York State EIP, Albany NY, [9]Oregon Dept of Human Services, Portland OR, [10]Tennessee Dept of Health, Nashville TN.

Background
Hemolytic uremic syndrome (HUS) can be a severe consequence of *Escherichia coli* O157 infection, with a mortality rate of 3-5%. To monitor trends in HUS, the Foodborne Disease Active Surveillance Network (FoodNet) conducted surveillance for pediatric and adult cases. Active surveillance among pediatric nephrologists and infection control practitioners (ICPs) was supplemented by a review of hospital discharge data (HDD) to determine the ability of HDD review to capture pediatric and adult cases not previously reported through active surveillance.

Methods
FoodNet conducted population-based active surveillance among pediatric nephrologists and ICPs for pediatric cases (age < 18 years) of HUS, between 2000 and 2002 in 9 states. Eight FoodNet sites also reviewed HDD to identify pediatric and adult HUS cases not previously identified by active surveillance (CO completed HDD for pediatric HUS cases only).

Results

From 2000 through 2002, 367 HUS cases were identified in the 8 states that participated in HDD review and active surveillance. Of these, 241 (66%) were identified through the active surveillance network and 126 (34%) were identified through HDD. Of the 265 pediatric cases, 212 (80%) were ascertained through active surveillance and 53 (20%) were identified from HDD. HDD increased pediatric HUS case ascertainment by 25% (range: 3% in Oregon to 83% in Maryland). Of 98 adult cases, 73 (74%) were identified from HDD and 25 (26%) were ascertained through active surveillance.

Conclusion

Supplementing active HUS surveillance with HDD review is valuable for population-based pediatric HUS surveillance. Moreover, HDD review is essential for capturing a large proportion of adult HUS cases. These results demonstrate that multiple methods for population-based HUS surveillance are important for accurately monitoring and understanding HUS epidemiologic trends in the United States.

Steering Committee Proposal
Centers for Disease Control and Prevention
Emerging Infections Program
Foodborne Diseases Active Surveillance Network (FoodNet)

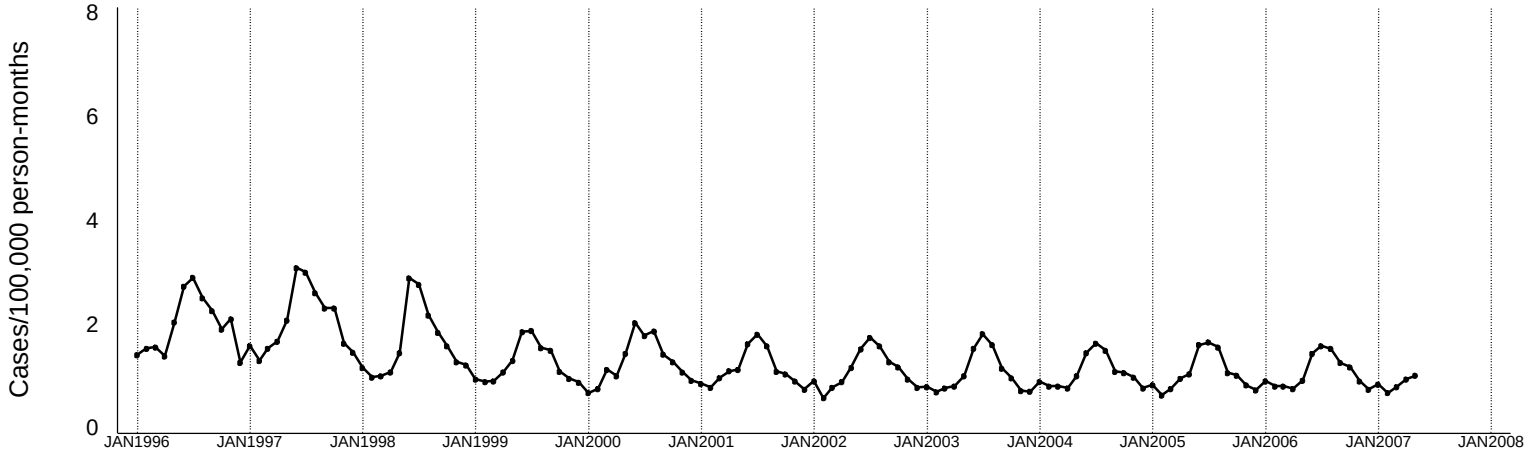
Proposed by:	Jennifer Nelson
Title:	Antimotility and Antimicrobial Use in Persons with Shiga toxin-producing *E. coli* O157 Infection in FoodNet Sites
Date Submitted:	July 31, 2007
Purpose:	To determine the extent to which antimotility and antimicrobial agents are used in the treatment of laboratory-confirmed STEC O157 infection.
Proposal:	Shiga toxin-producing *Escherichia coli* O157 (STEC O157) is an important cause of diarrheal illness in United States. Development of post-diarrheal HUS is a major complication of STEC O157 infection. Antimicrobial agents have been associated with the development of HUS; however, expert consensus is lacking. IDSA Guidelines for Treatment of Infectious Diarrhea advise against the use of antimotility agents to treat STEC O157 infection and recommend careful judgment when considering empiric treatment of diarrhea with antimicrobial agents.
Data sources:	1996-1997 and 1999-2000 FoodNet STEC O157 case-control studies
Timeline:	ASAP
Publication:	Brief report for publication in *Clinical Infectious Diseases*.

FoodNet Data through May
(data transmitted 7/20/2007)

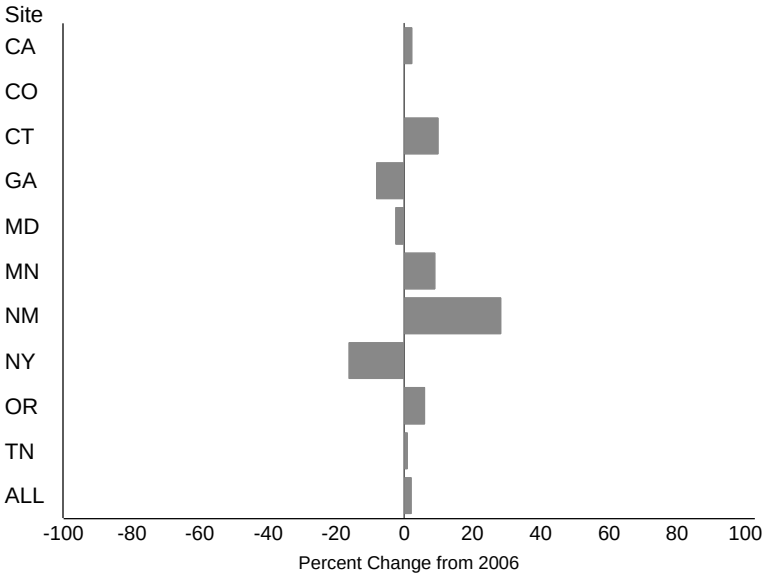
Pathogen	2006		2007		2007 vs 2006	5 year Mean	
	count	rate	count	rate	p-value	count	Rate
Campylobacter	1887	4.20	1923	4.28		1847	4.22
Listeria	43	0.10	37	0.08		37	0.09
***Salmonella* , all serotypes**	1819	4.05	2064	4.59	0.0001	1823	4.20
***S. T* yphimurium**	327	0.73	313	0.70		371	0.86
***S.* Enteritidis**	355	0.79	392	0.87		324	0.75
S. Newport	83	0.18	93	0.21		108	0.25
***S.* Heidelberg**	79	0.18	99	0.22		100	0.23
***S.* Javiana**	28	0.06	31	0.07		35	0.08
***Salmonella* , all others**	947	2.11	1136	2.53	0.0000	885	2.02
***Shigella* , all species**	694	1.54	996	2.22	0.0000	940	2.19
Shigella sonnei	453	1.01	794	1.77	0.0000	719	1.69
Shigella flexneri	159	0.35	127	0.28		150	0.34
***Shigella* , all others**	82	0.18	75	0.17		70	0.16
STEC O157	106	0.24	100	0.22		100	0.23
STEC non-O157	60	0.13	35	0.08		27	0.06
***Vibrio* , all species**	25	0.06	10	0.02	0.0113	23	0.05
Vibrio parahaemolyticus	9	0.02	7	0.02		8	0.02
Vibrio vulnificus	4	0.01	1	0.00		2	0.01
***Vibrio* , all others**	12	0.03	2	0.00	0.0074	13	0.03
Yersinia	72	0.16	77	0.17		69	0.16
Cryptosporidium	240	0.53	214	0.48		174	0.39
Cyclospora	3	0.01	3	0.01		11	0.02

Campylobacter

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

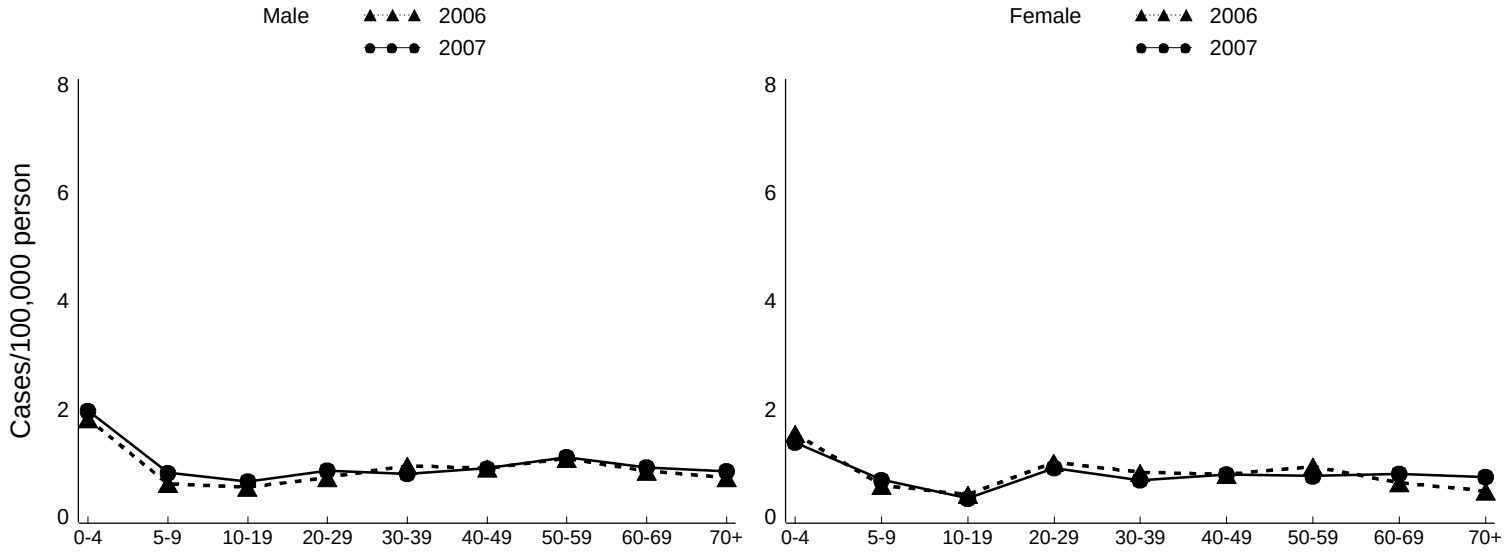


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	341	10.64	334	10.42	354	11.02
CO	147	5.683	147	5.683	133	5.197
CT	178	5.071	162	4.615	169	4.832
GA	212	2.337	231	2.546	215	2.424
MD	119	2.125	122	2.178	115	2.070
MN	305	5.942	280	5.455	268	5.267
NM	100	5.186	78	4.045	100	5.212
NY	140	3.250	167	3.877	151	3.743
OR	251	6.894	237	6.509	218	6.078
TN	130	2.180	129	2.163	125	2.332
ALL	1923	4.278	1887	4.198	1847	4.218

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

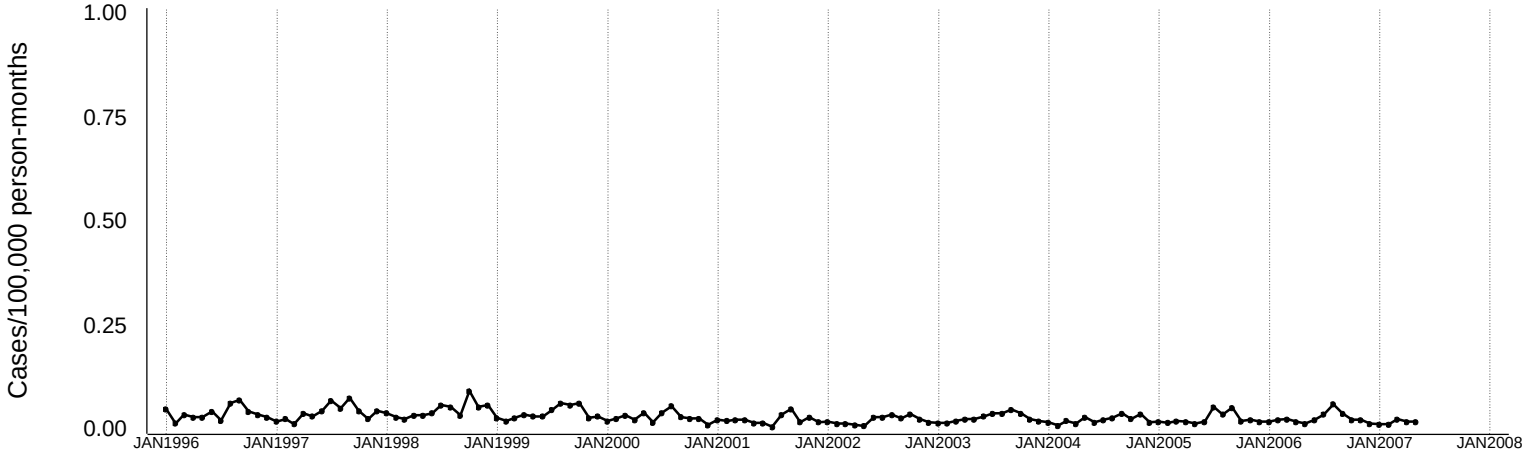


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

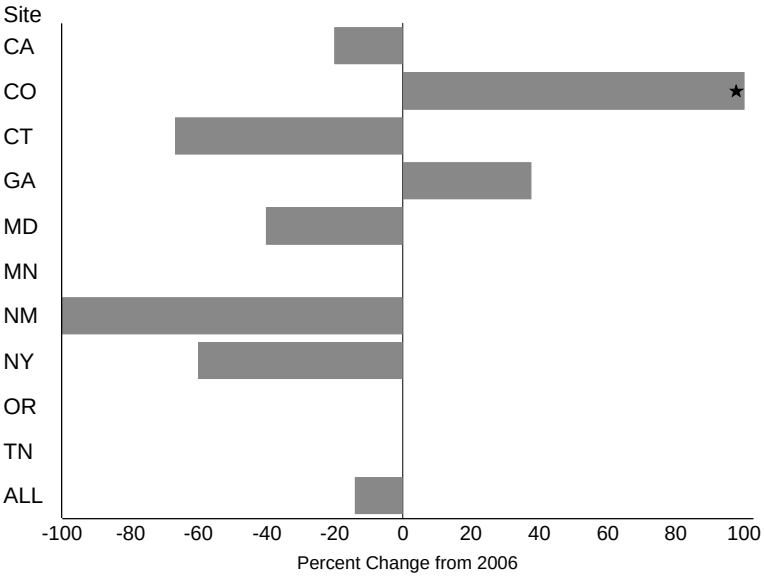
Report date: 30-July-2007

Listeria

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

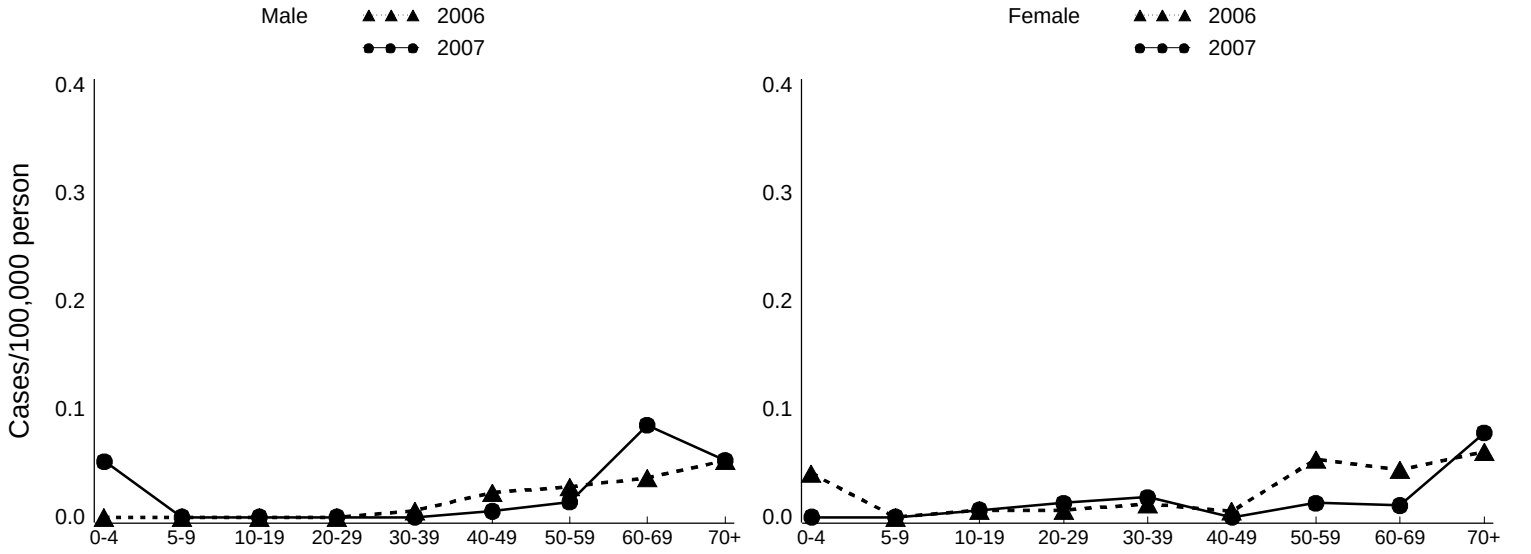


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	4	0.125	5	0.156	6	0.175
CO	4	0.155	1	0.039	1	0.047
CT	2	0.057	6	0.171	3	0.091
GA	11	0.121	8	0.088	9	0.099
MD	3	0.054	5	0.089	5	0.090
MN	2	0.039	2	0.039	2	0.035
NM	0	0.000	2	0.104	1	0.052
NY	2	0.046	5	0.116	4	0.095
OR	3	0.082	3	0.082	3	0.072
TN	6	0.101	6	0.101	4	0.074
ALL	37	0.082	43	0.096	37	0.085

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

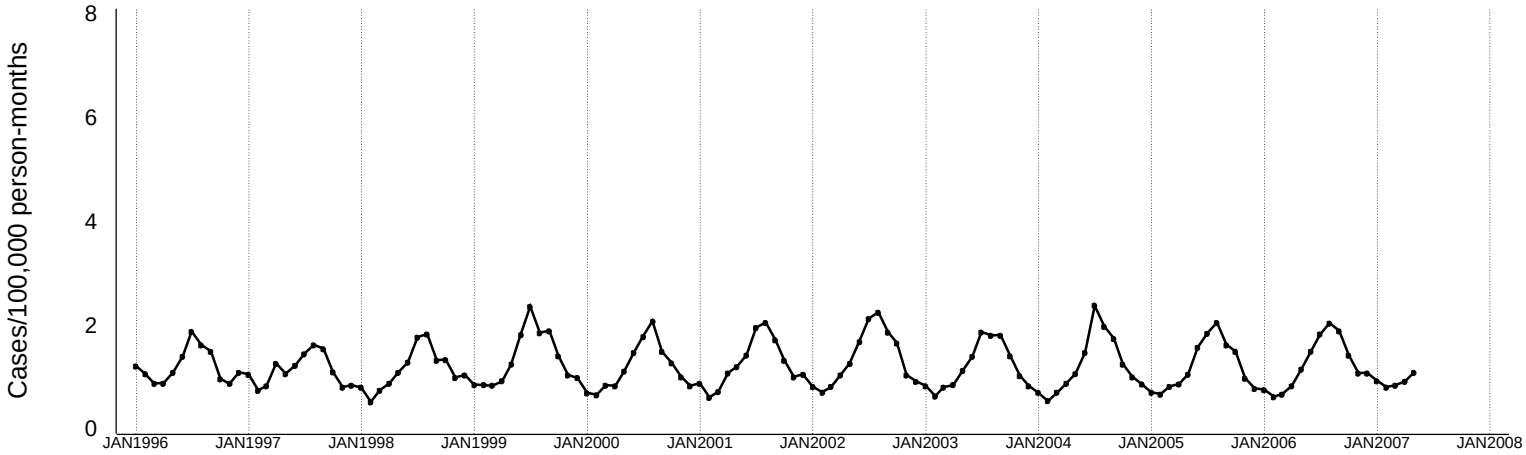


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

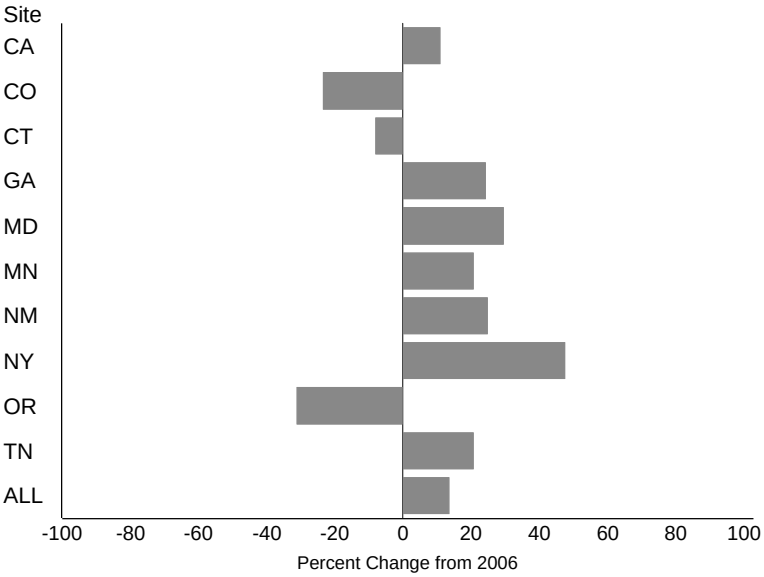
Report date: 30-July-2007

Salmonella, all serotypes

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

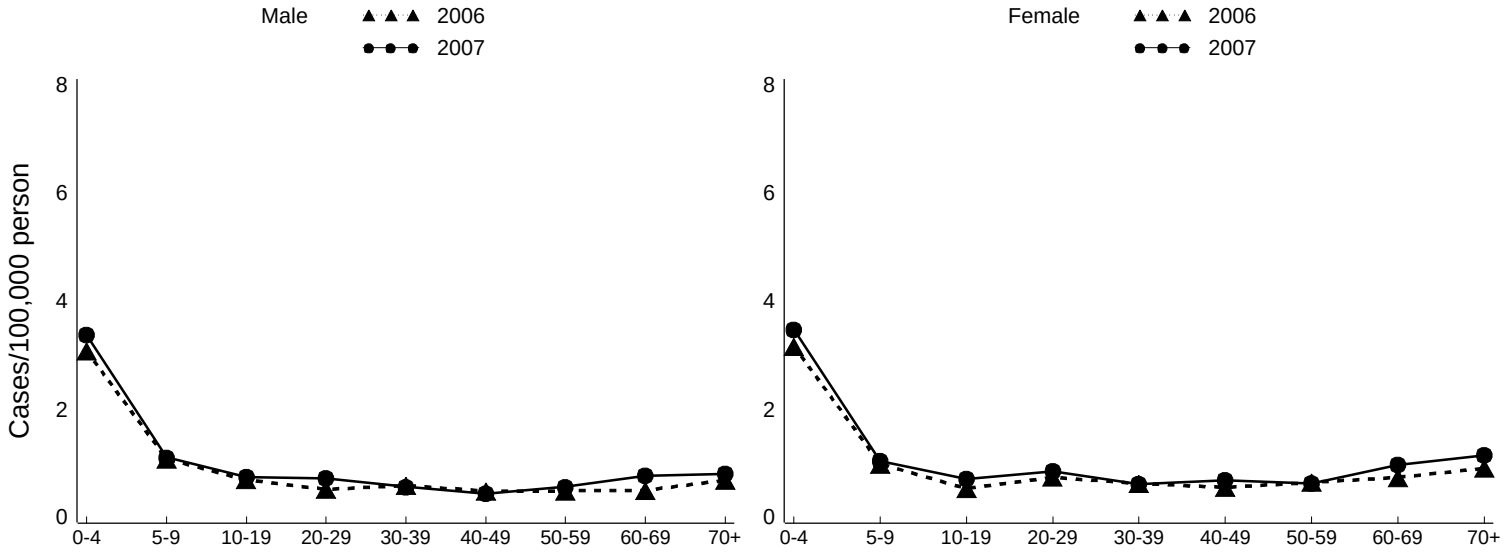


	2007		2006		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	163	5.08	147	4.58	160	4.98
CO	121	4.68	158	6.11	111	4.35
CT	128	3.65	139	3.96	139	3.98
GA	504	5.56	406	4.48	401	4.52
MD	238	4.25	184	3.29	230	4.15
MN	257	5.01	213	4.15	199	3.91
NM	91	4.72	73	3.79	78	4.08
NY	202	4.69	137	3.18	143	3.60
OR	102	2.80	148	4.06	144	4.01
TN	258	4.33	214	3.59	218	4.14
ALL	2064	4.59	1819	4.05	1823	4.20

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

Calendar year through May: Rates for 2006 and 2007 by age group and sex

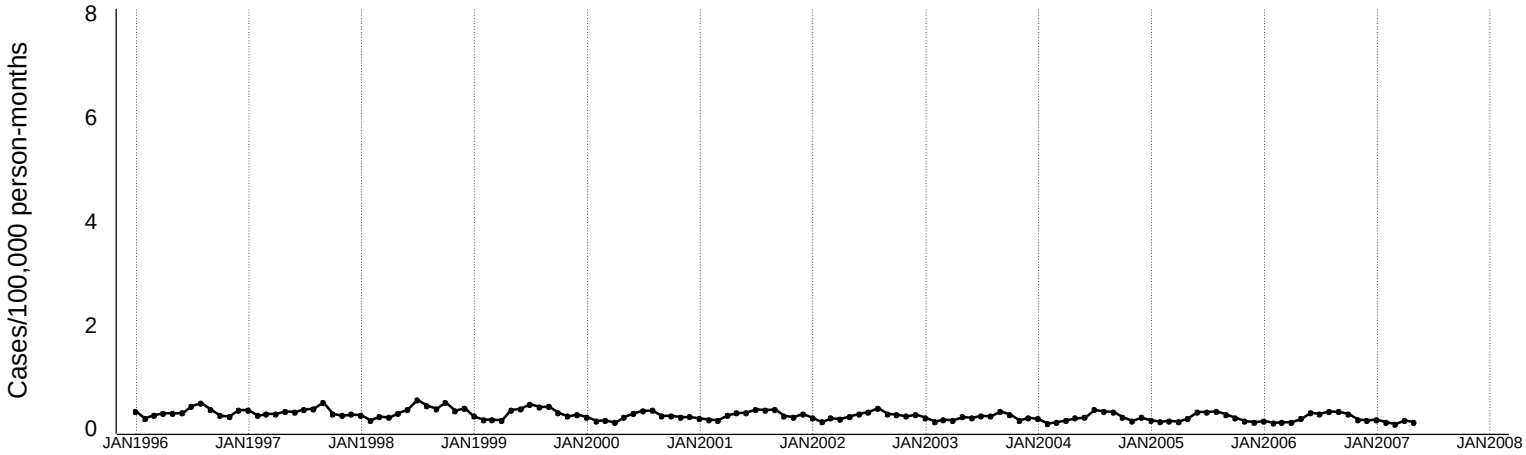


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

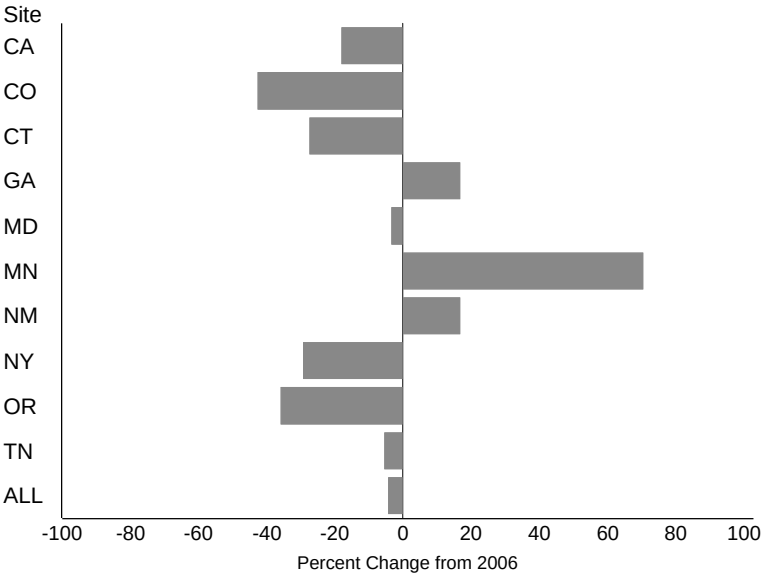
Report date: 30-July-2007

Salmonella Typhimurium

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

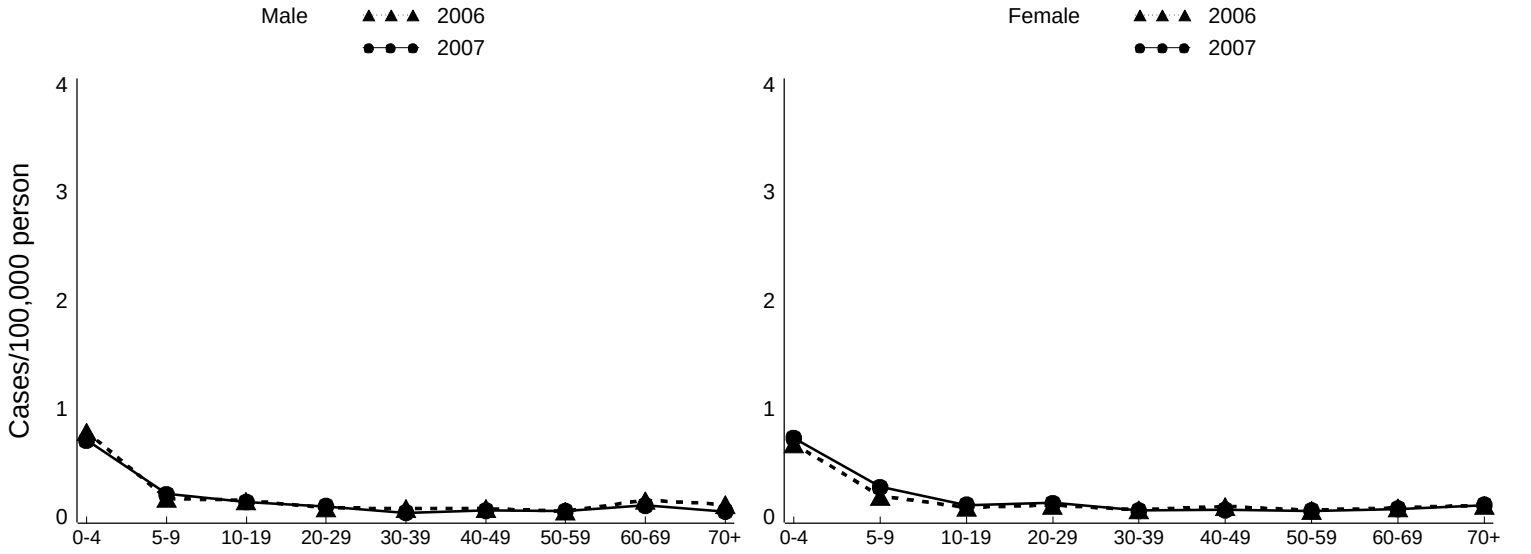


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	23	0.72	28	0.87	28	0.89
CO	23	0.89	40	1.55	25	0.99
CT	16	0.46	22	0.63	27	0.77
GA	91	1.00	78	0.86	86	0.97
MD	29	0.52	30	0.54	41	0.74
MN	46	0.90	27	0.53	41	0.81
NM	14	0.73	12	0.62	14	0.71
NY	17	0.39	24	0.56	26	0.65
OR	18	0.49	28	0.77	27	0.76
TN	36	0.60	38	0.64	55	1.09
ALL	313	0.70	327	0.73	371	0.86

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

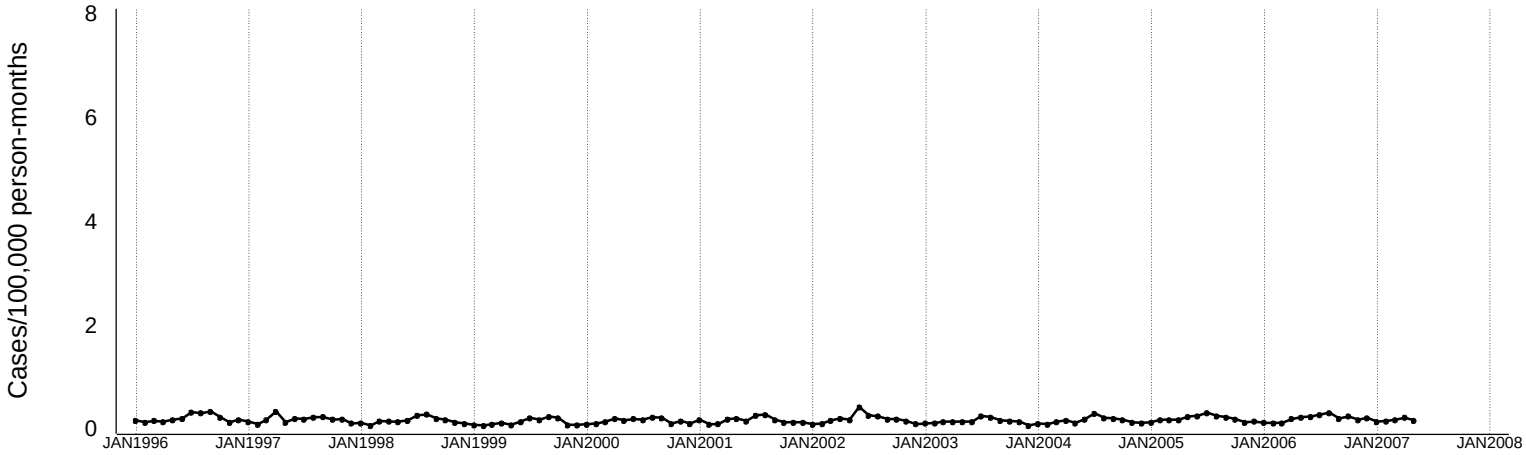


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

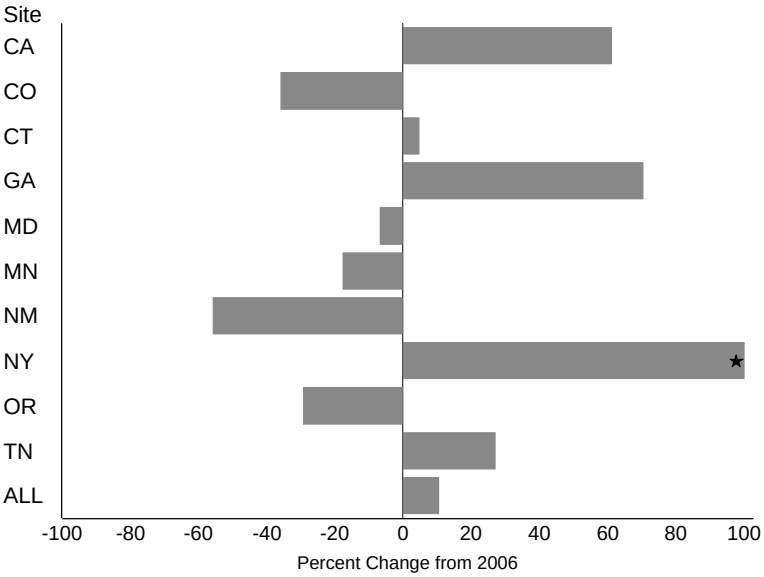
Report date: 30-July-2007

Salmonella Enteritidis

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

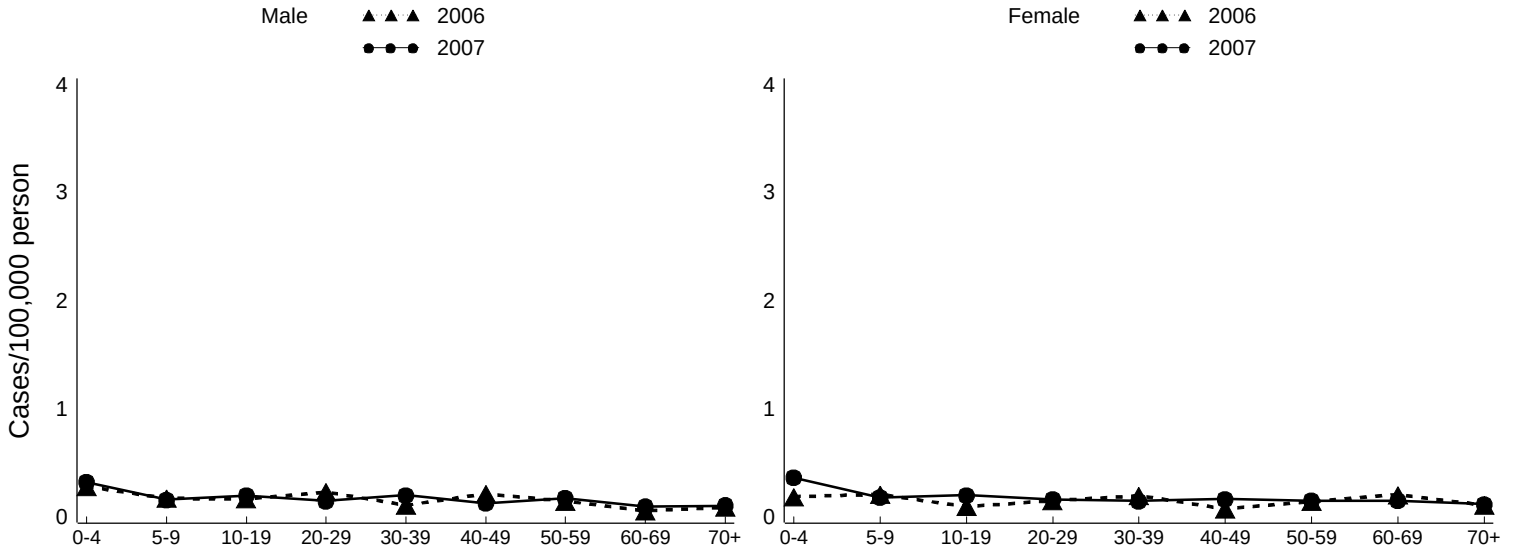


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	29	0.905	18	0.561	24	0.754
CO	18	0.696	28	1.083	23	0.886
CT	45	1.282	43	1.225	37	1.059
GA	63	0.694	37	0.408	29	0.321
MD	56	1.000	60	1.071	74	1.339
MN	66	1.286	80	1.559	49	0.957
NM	4	0.207	9	0.467	9	0.451
NY	61	1.416	30	0.696	29	0.726
OR	17	0.467	24	0.659	25	0.702
TN	33	0.553	26	0.436	26	0.471
ALL	392	0.872	355	0.790	324	0.747

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

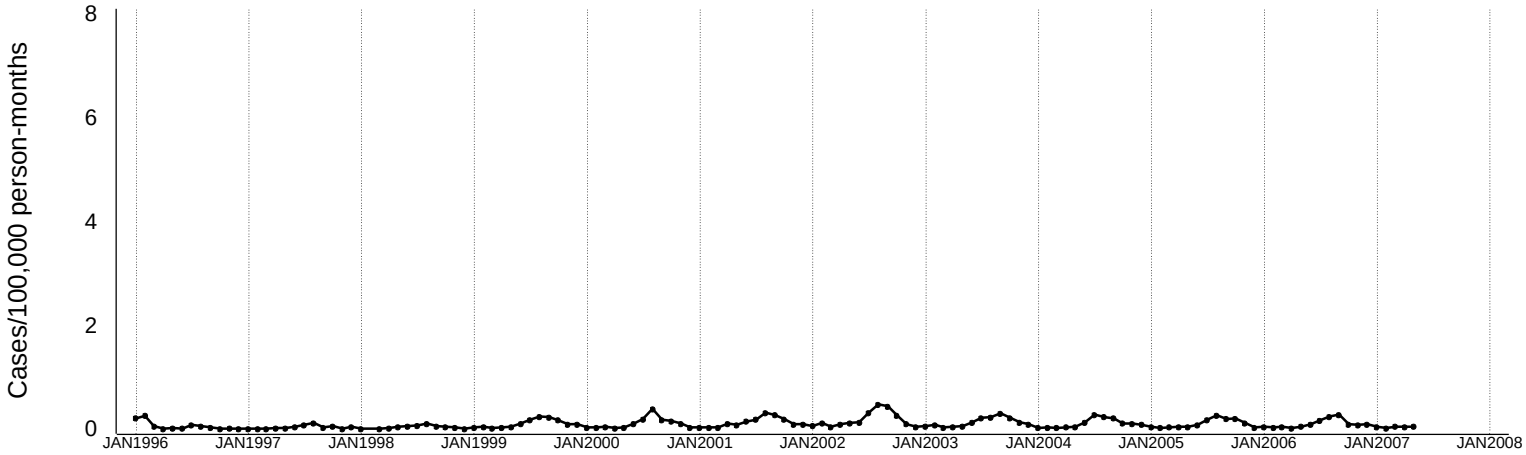


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

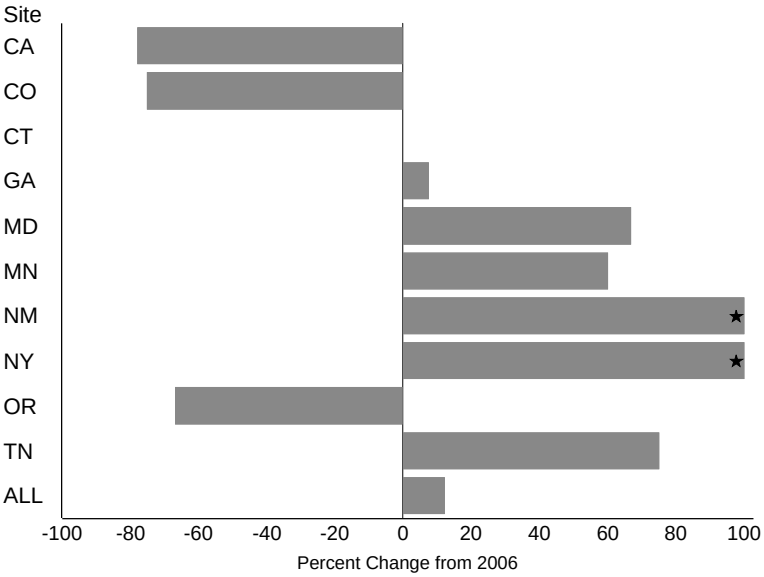
Report date: 30-July-2007

Salmonella Newport

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

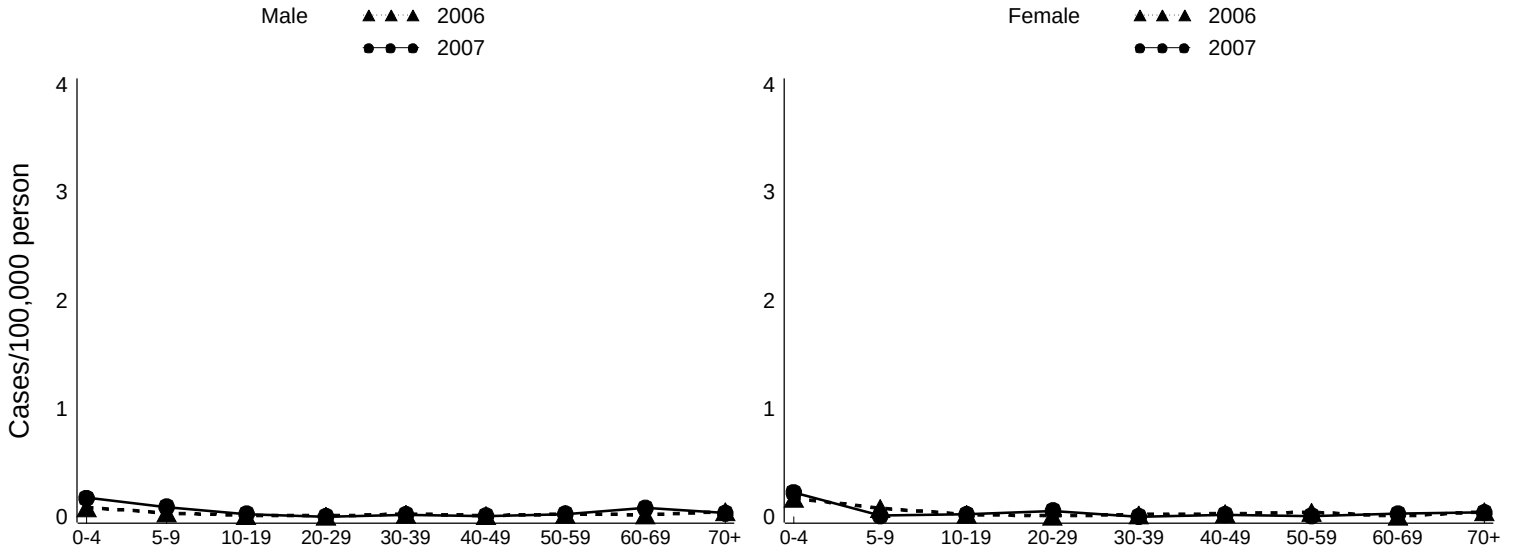


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	2	0.062	9	0.281	10	0.324
CO	3	0.116	12	0.464	7	0.282
CT	5	0.142	5	0.142	9	0.258
GA	29	0.320	27	0.298	31	0.352
MD	5	0.089	3	0.054	7	0.120
MN	8	0.156	5	0.097	11	0.209
NM	14	0.726	4	0.207	5	0.277
NY	11	0.255	4	0.093	11	0.316
OR	2	0.055	6	0.165	11	0.297
TN	14	0.235	8	0.134	6	0.109
ALL	93	0.207	83	0.185	108	0.253

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

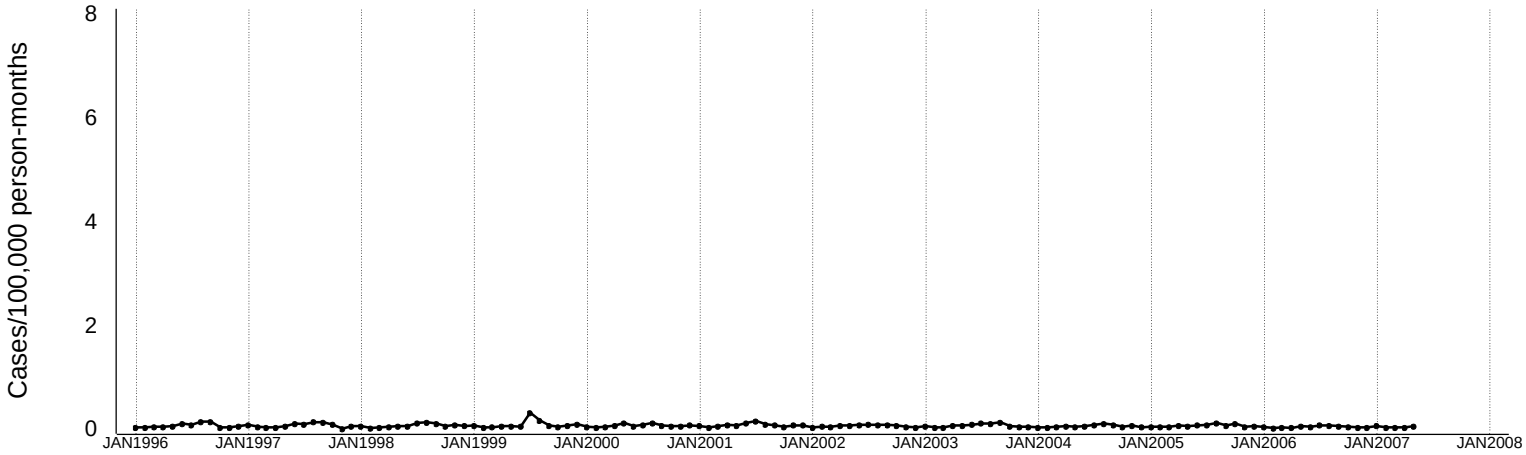


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

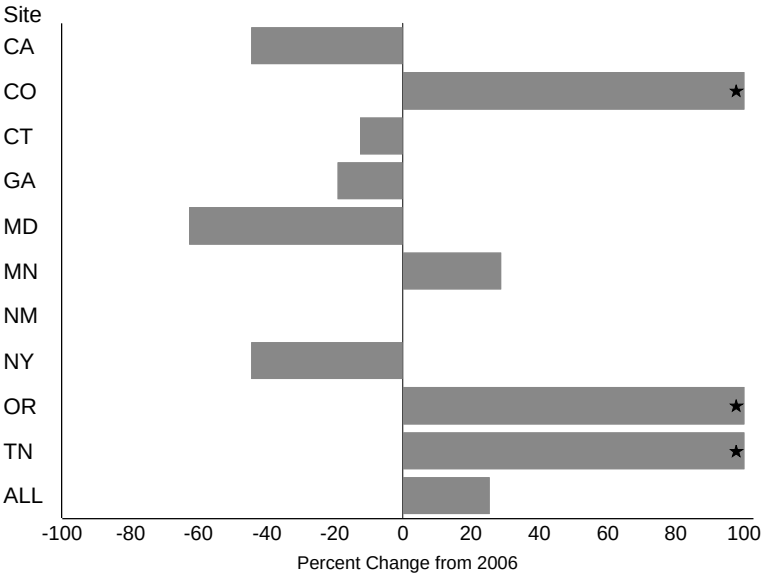
Report date: 30-July-2007

Salmonella Heidelberg

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

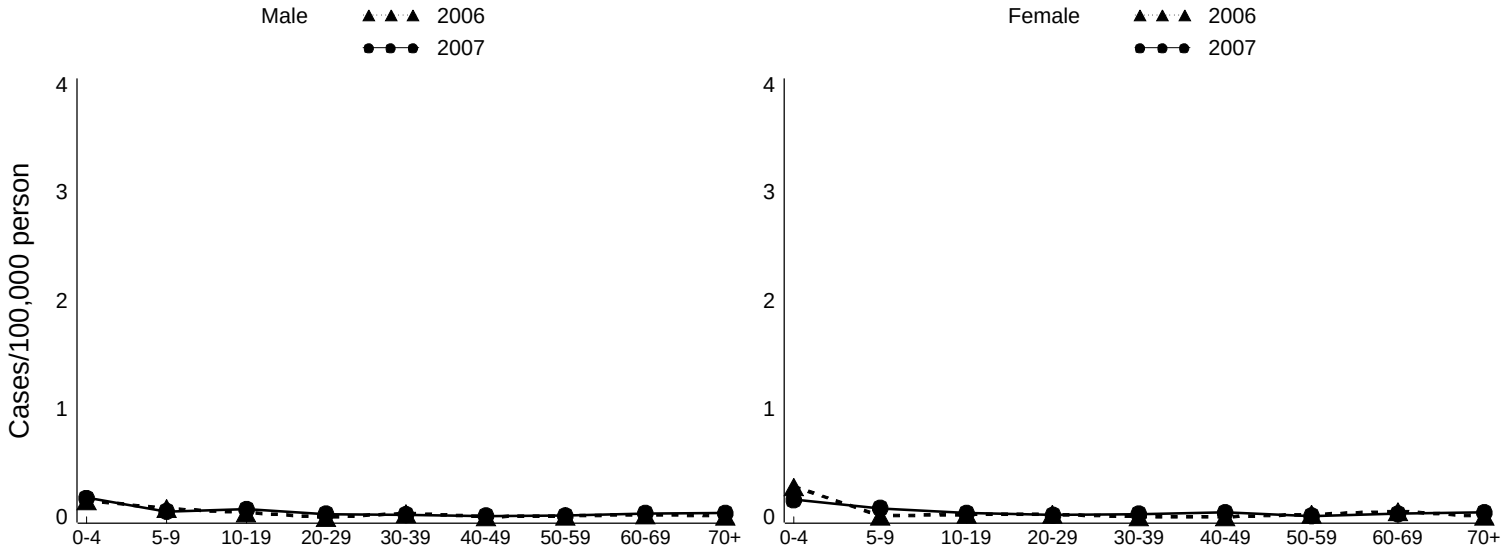


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	5	0.156	9	0.281	14	0.449
CO	10	0.387	4	0.155	5	0.181
CT	7	0.199	8	0.228	7	0.201
GA	17	0.187	21	0.231	26	0.291
MD	3	0.054	8	0.143	9	0.166
MN	9	0.175	7	0.136	9	0.173
NM	1	0.052	1	0.052	1	0.052
NY	5	0.116	9	0.209	10	0.250
OR	8	0.220	3	0.082	7	0.200
TN	34	0.570	9	0.151	12	0.229
ALL	99	0.220	79	0.176	100	0.234

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex



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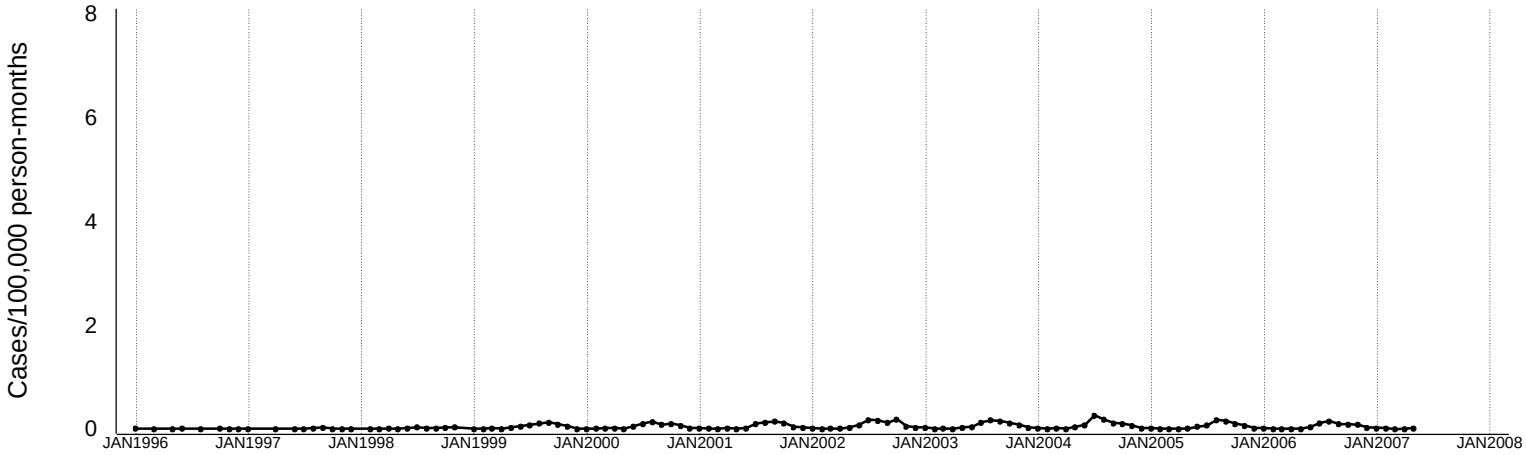
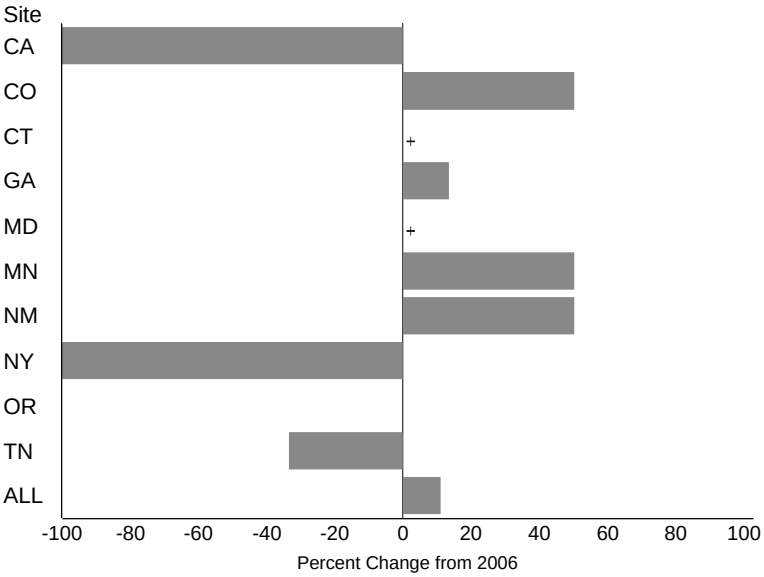
Report date: 30-July-2007

Salmonella Javiana

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

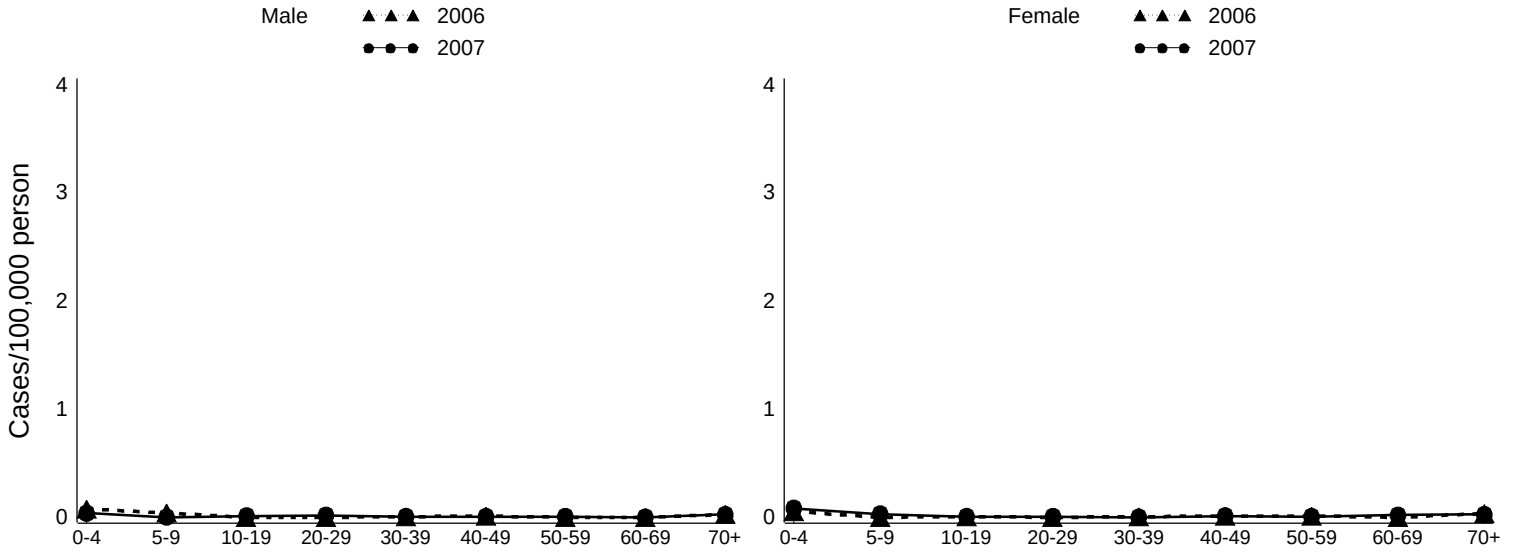


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	0	0.000	2	0.062	2	0.056
CO	3	0.116	2	0.077	0	0.015
CT	1	0.028	0	0.000	1	0.029
GA	17	0.187	15	0.165	19	0.217
MD	1	0.018	0	0.000	2	0.040
MN	3	0.058	2	0.039	2	0.035
NM	3	0.156	2	0.104	4	0.192
NY	0	0.000	1	0.023	1	0.023
OR	1	0.027	1	0.027	1	0.017
TN	2	0.034	3	0.050	4	0.072
ALL	31	0.069	28	0.062	35	0.079

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex



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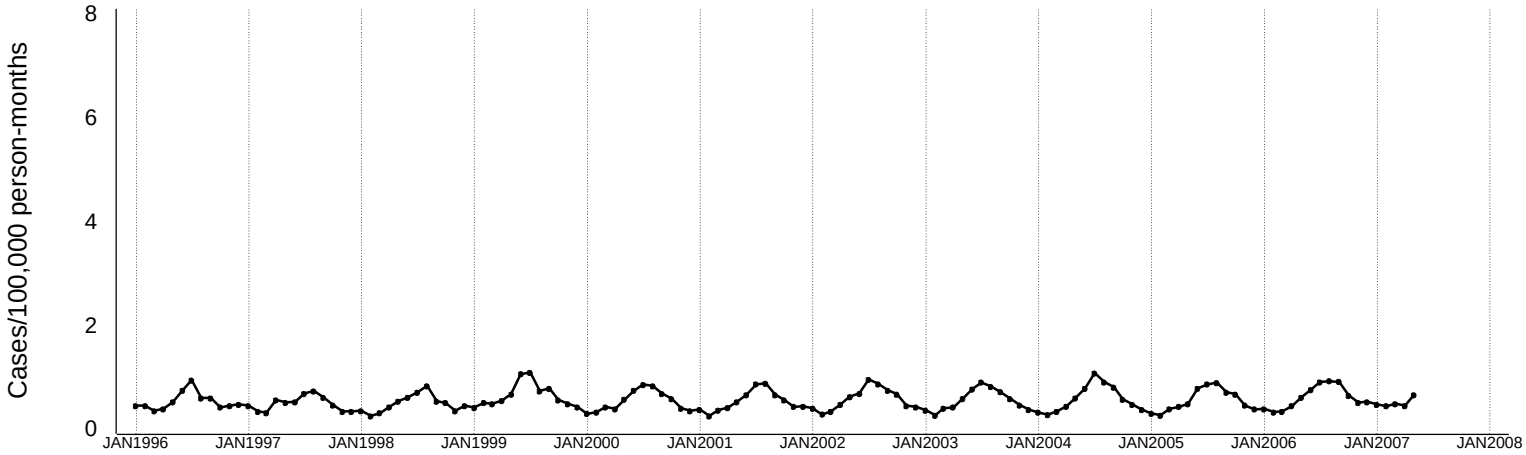
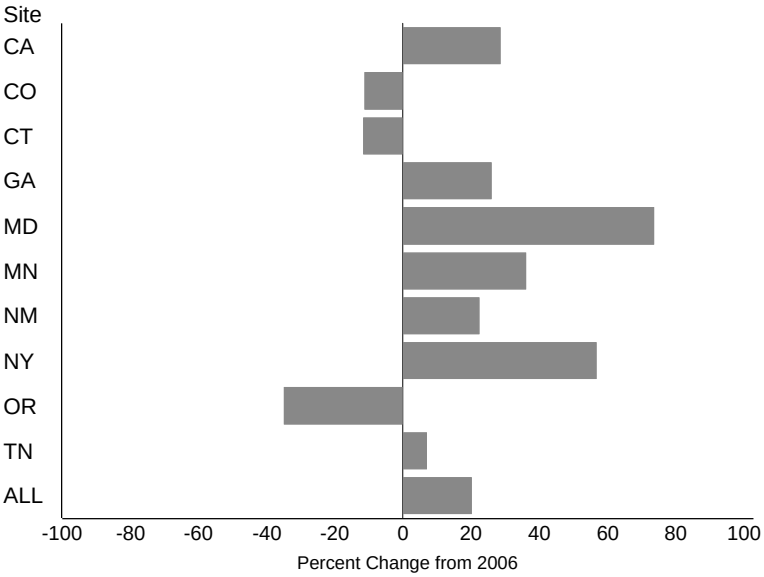
Report date: 30-July-2007

Salmonella, all others

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

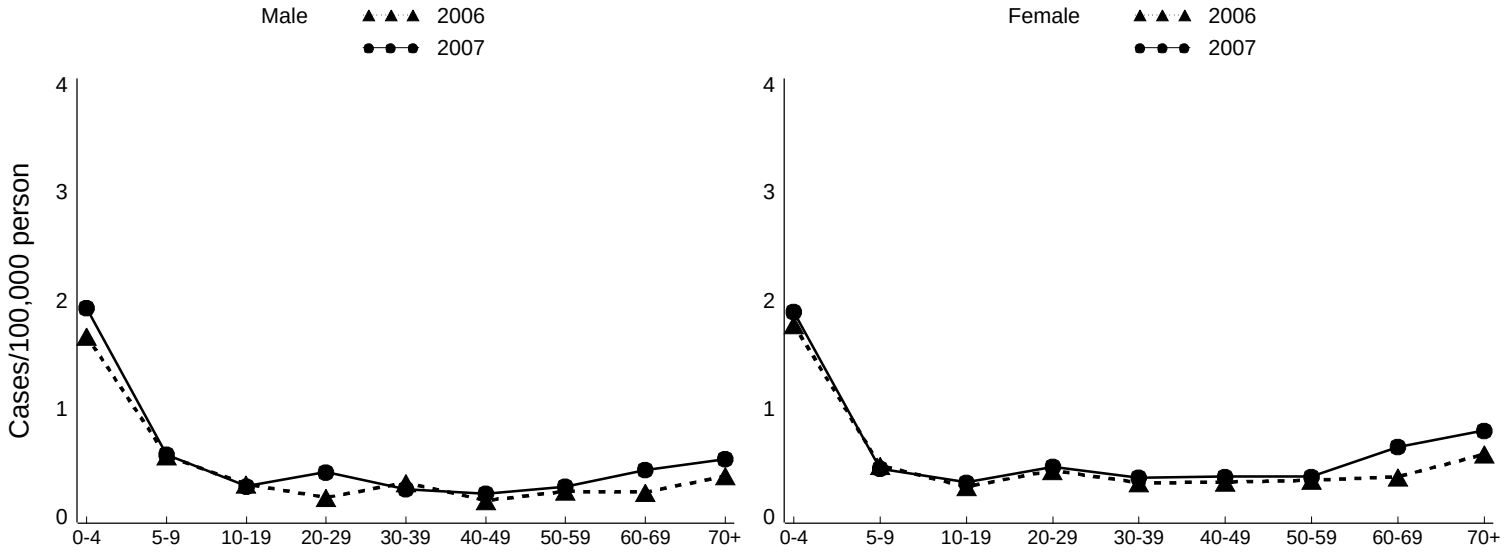


	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	104	3.24	81	2.53	81	2.51
CO	64	2.47	72	2.78	51	1.99
CT	54	1.54	61	1.74	58	1.66
GA	287	3.16	228	2.51	210	2.37
MD	144	2.57	83	1.48	97	1.75
MN	125	2.44	92	1.79	87	1.72
NM	55	2.85	45	2.33	46	2.40
NY	108	2.51	69	1.60	66	1.63
OR	56	1.54	86	2.36	73	2.03
TN	139	2.33	130	2.18	117	2.18
ALL	1136	2.53	947	2.11	885	2.02

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

Calendar year through May: Rates for 2006 and 2007 by age group and sex

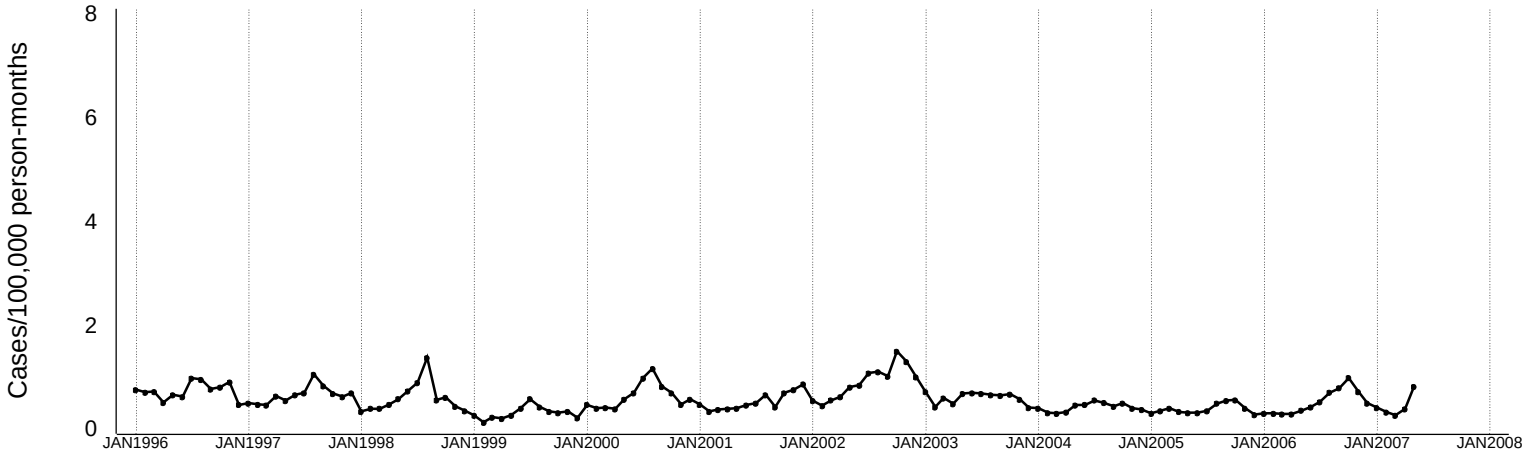


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

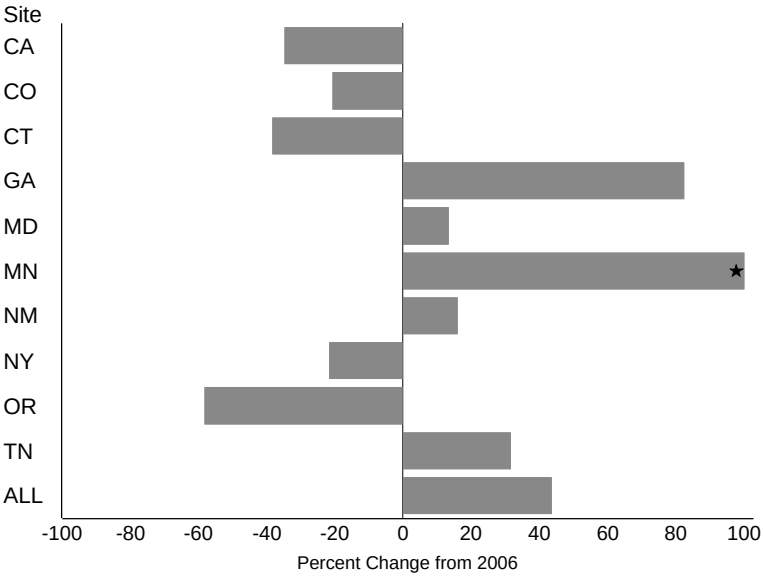
Report date: 30-July-2007

Shigella, all species

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

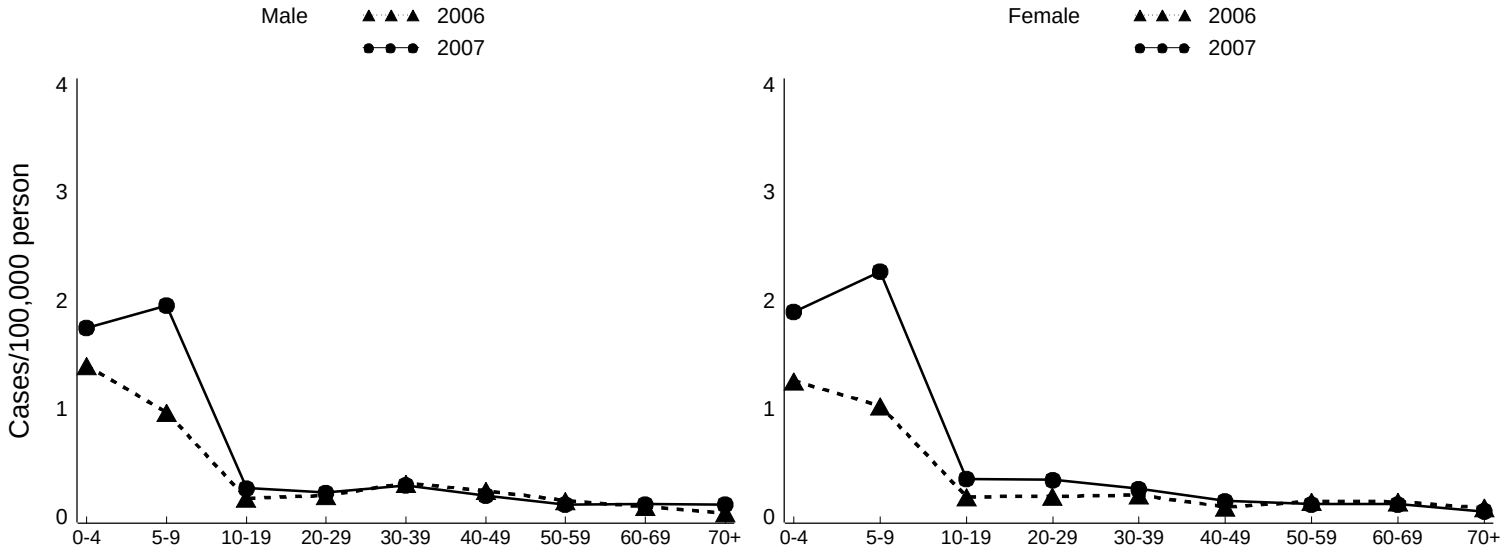


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	53	1.65	81	2.53	92	2.86
CO	31	1.20	39	1.51	30	1.19
CT	13	0.37	21	0.60	24	0.68
GA	616	6.79	338	3.73	375	4.26
MD	34	0.61	30	0.54	119	2.16
MN	109	2.12	39	0.76	45	0.88
NM	44	2.28	38	1.97	41	2.16
NY	11	0.26	14	0.32	46	1.10
OR	18	0.49	43	1.18	30	0.85
TN	67	1.12	51	0.86	138	2.42
ALL	996	2.22	694	1.54	940	2.19

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

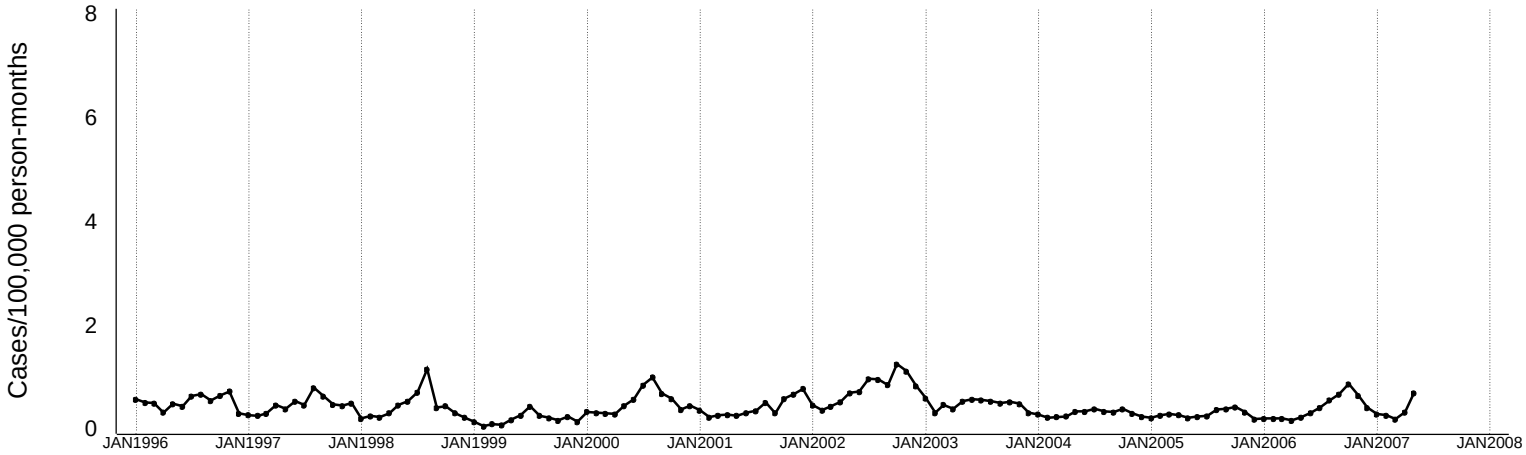


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

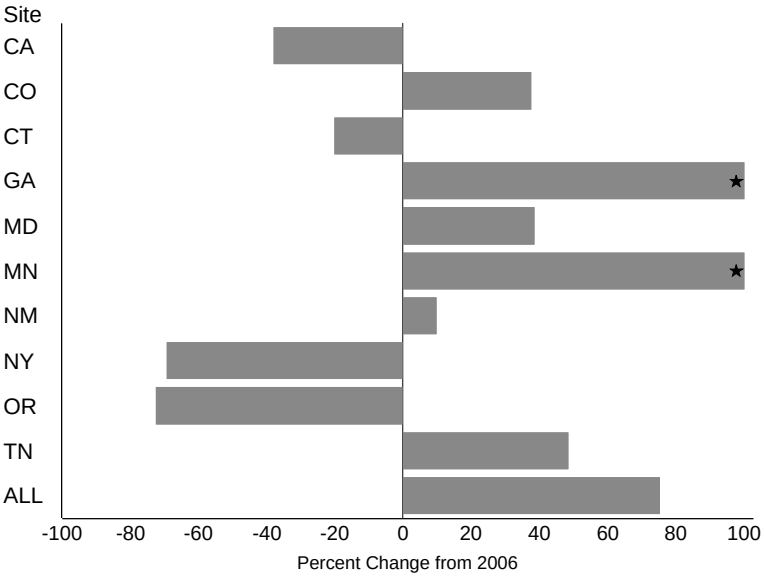
Report date: 30-July-2007

Shigella sonnei

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

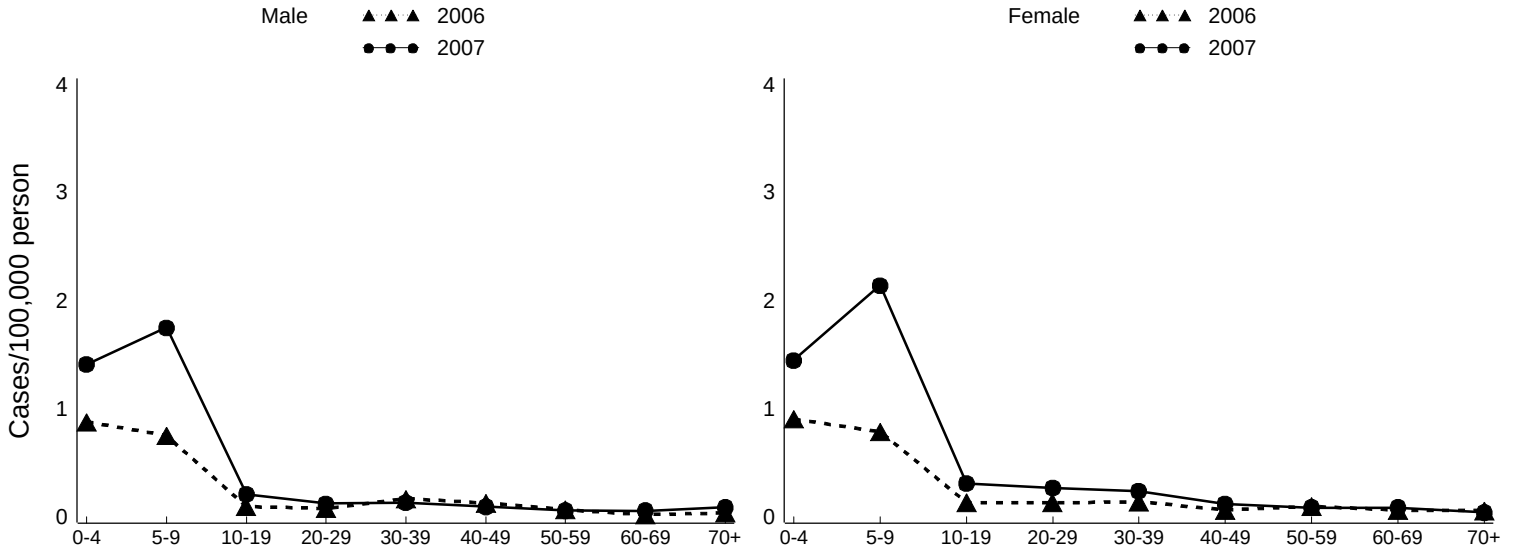


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	23	0.717	37	1.154	43	1.327
CO	22	0.851	16	0.619	17	0.685
CT	8	0.228	10	0.285	14	0.401
GA	534	5.886	251	2.767	301	3.425
MD	18	0.321	13	0.232	102	1.859
MN	97	1.890	22	0.429	32	0.628
NM	34	1.763	31	1.608	30	1.582
NY	4	0.093	13	0.302	41	0.987
OR	8	0.220	29	0.796	17	0.478
TN	46	0.771	31	0.520	121	2.085
ALL	794	1.766	453	1.008	719	1.685

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

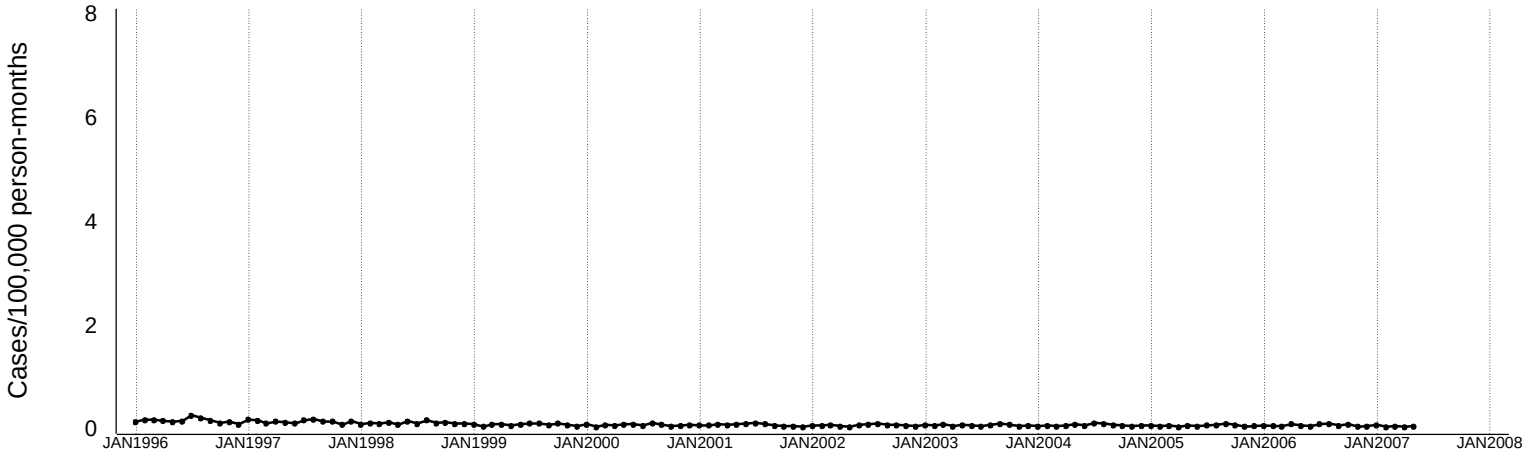


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

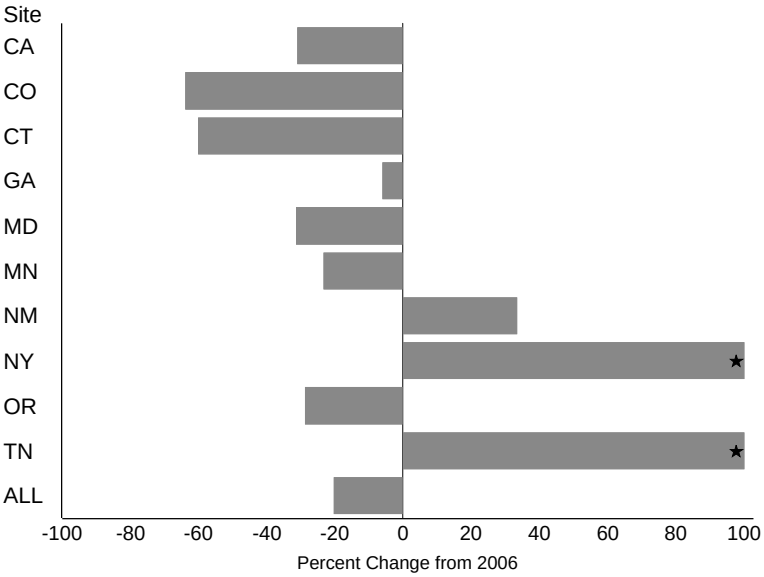
Report date: 30-July-2007

Shigella flexneri

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

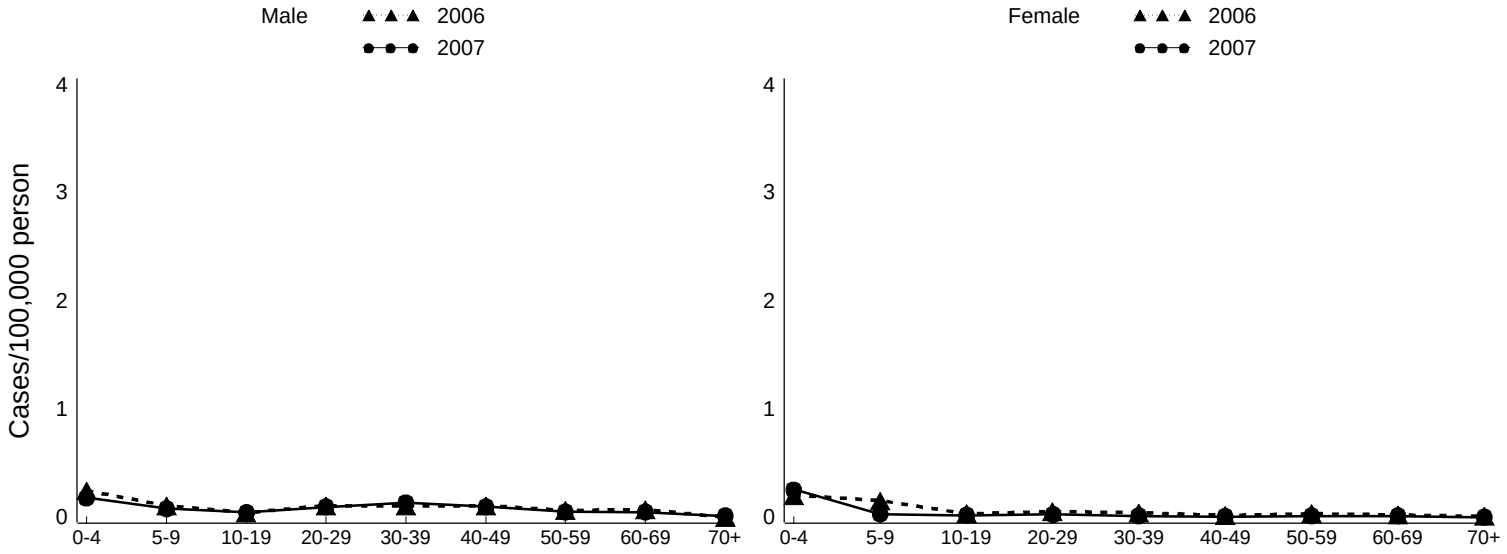


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	27	0.842	39	1.216	42	1.297
CO	8	0.309	22	0.851	12	0.469
CT	4	0.114	10	0.285	8	0.229
GA	32	0.353	34	0.375	32	0.361
MD	11	0.196	16	0.286	14	0.249
MN	10	0.195	13	0.253	11	0.220
NM	8	0.415	6	0.311	9	0.487
NY	6	0.139	1	0.023	4	0.096
OR	10	0.275	14	0.385	13	0.362
TN	11	0.184	4	0.067	5	0.113
ALL	127	0.283	159	0.354	150	0.341

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

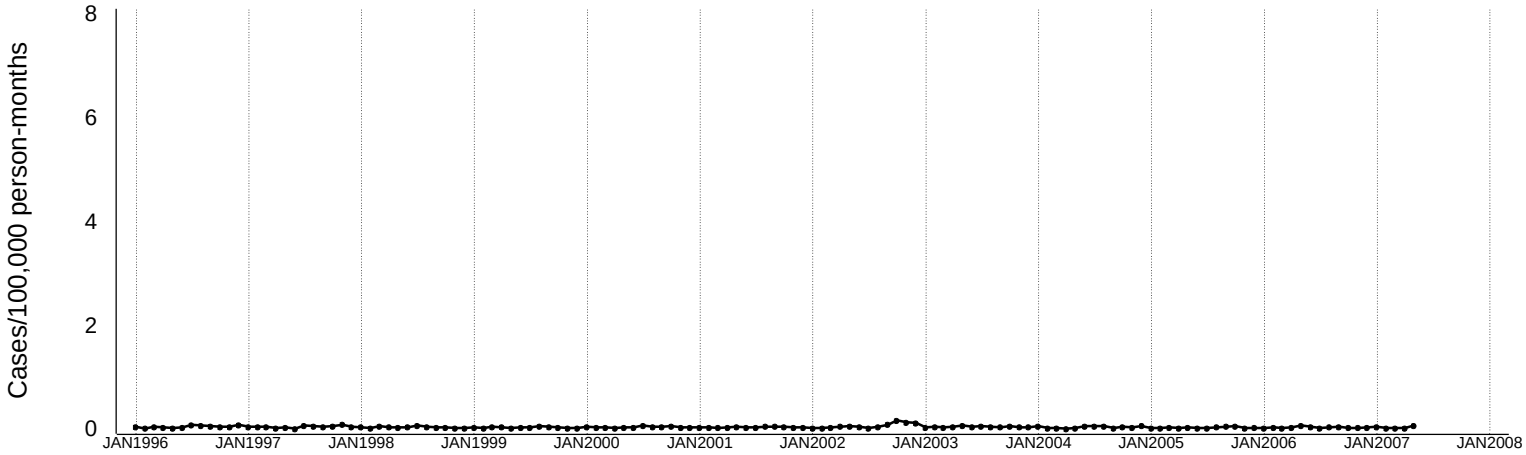


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

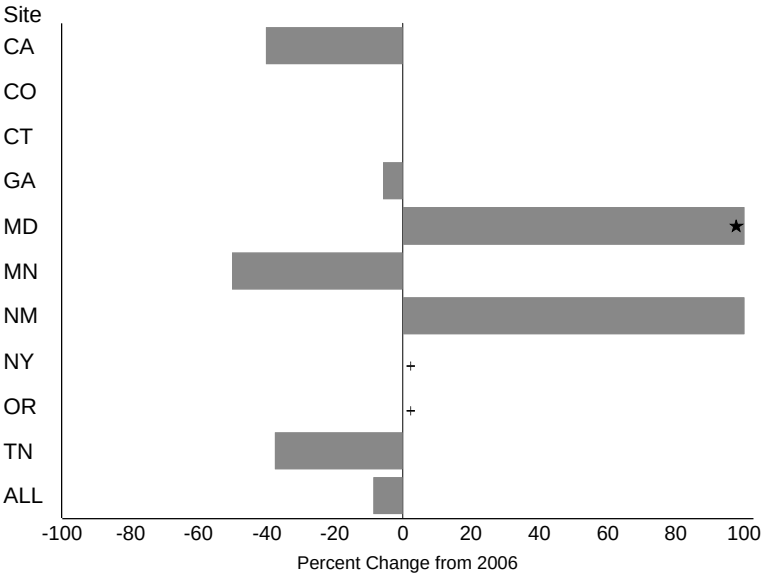
Report date: 30-July-2007

Shigella, all others

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

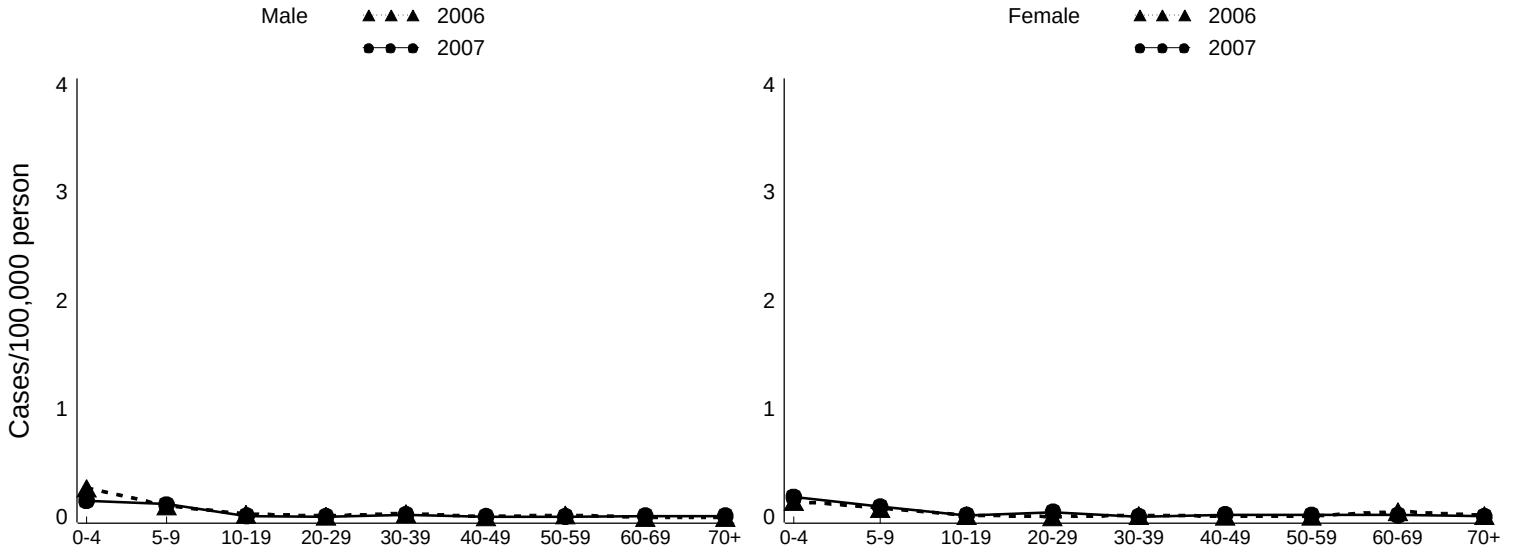


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	3	0.094	5	0.156	7	0.231
CO	1	0.039	1	0.039	1	0.031
CT	1	0.028	1	0.028	2	0.046
GA	50	0.551	53	0.584	42	0.471
MD	5	0.089	1	0.018	3	0.055
MN	2	0.039	4	0.078	2	0.031
NM	2	0.104	1	0.052	2	0.087
NY	1	0.023	0	0.000	1	0.019
OR	0	0.000	0	0.000	0	0.006
TN	10	0.168	16	0.268	12	0.221
ALL	75	0.167	82	0.182	70	0.164

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

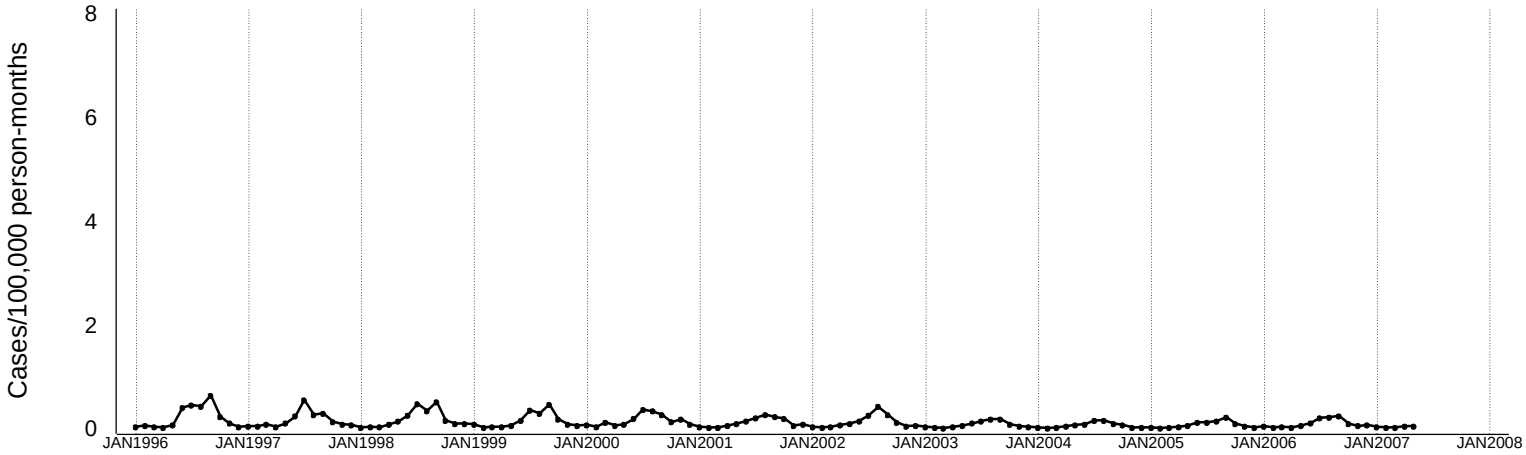


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

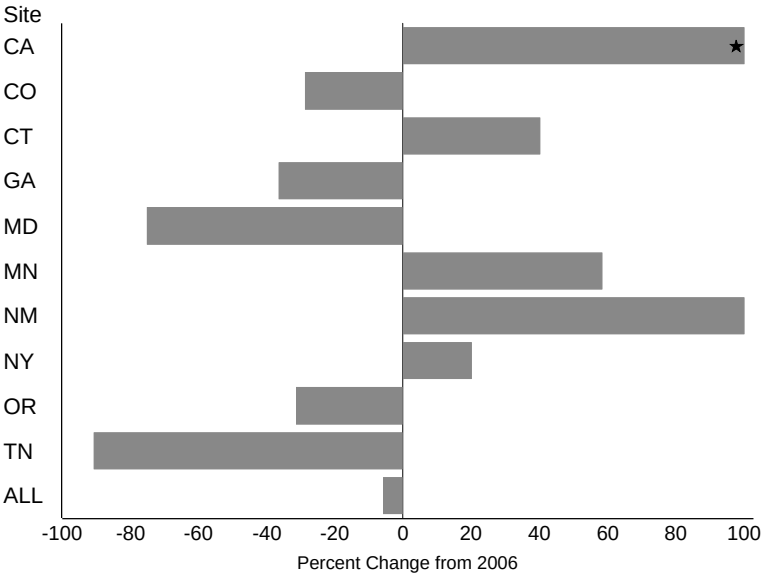
Report date: 30-July-2007

STEC O157

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

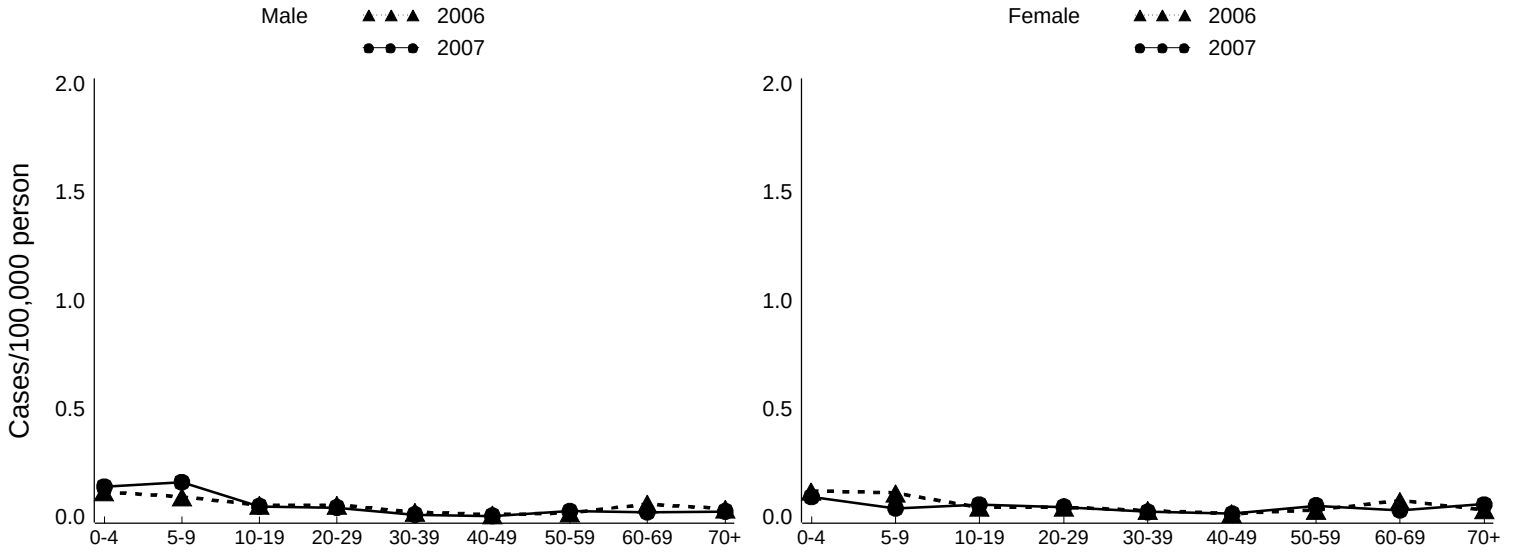


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	13	0.405	6	0.187	6	0.175
CO	5	0.193	7	0.271	8	0.306
CT	7	0.199	5	0.142	9	0.264
GA	7	0.077	11	0.121	11	0.122
MD	1	0.018	4	0.071	4	0.079
MN	38	0.740	24	0.468	22	0.437
NM	4	0.207	2	0.104	3	0.139
NY	12	0.279	10	0.232	10	0.254
OR	11	0.302	16	0.439	15	0.424
TN	2	0.034	21	0.352	12	0.221
ALL	100	0.222	106	0.236	100	0.232

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

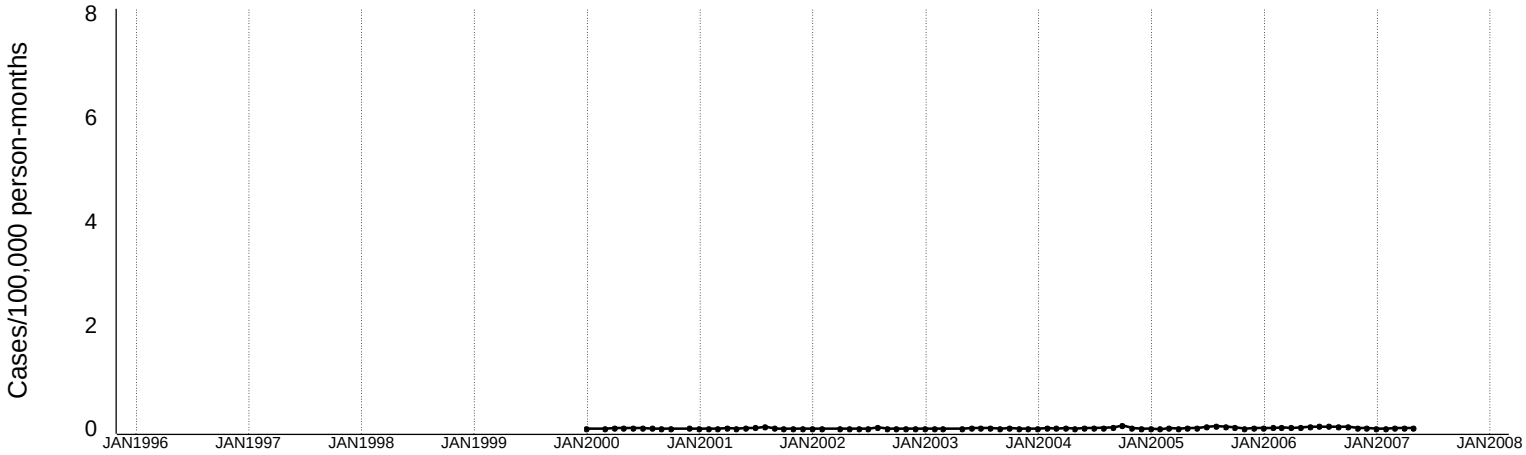


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

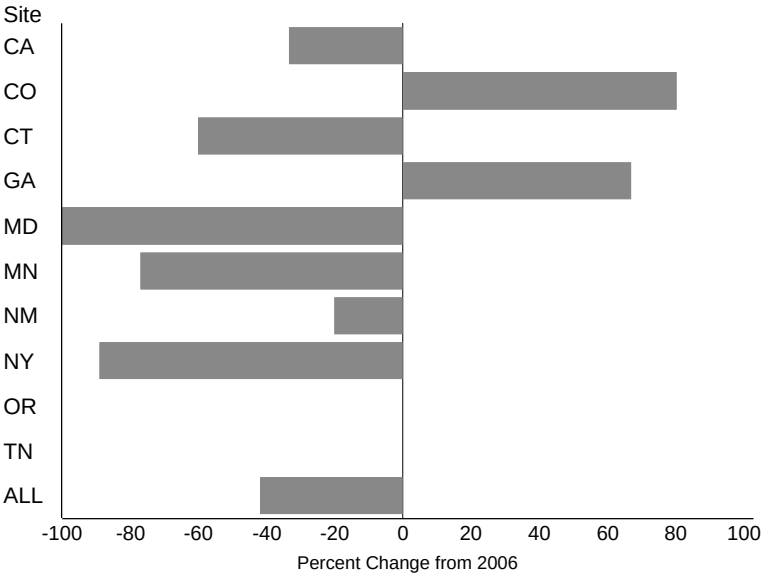
Report date: 30-July-2007

STEC Non-O157

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

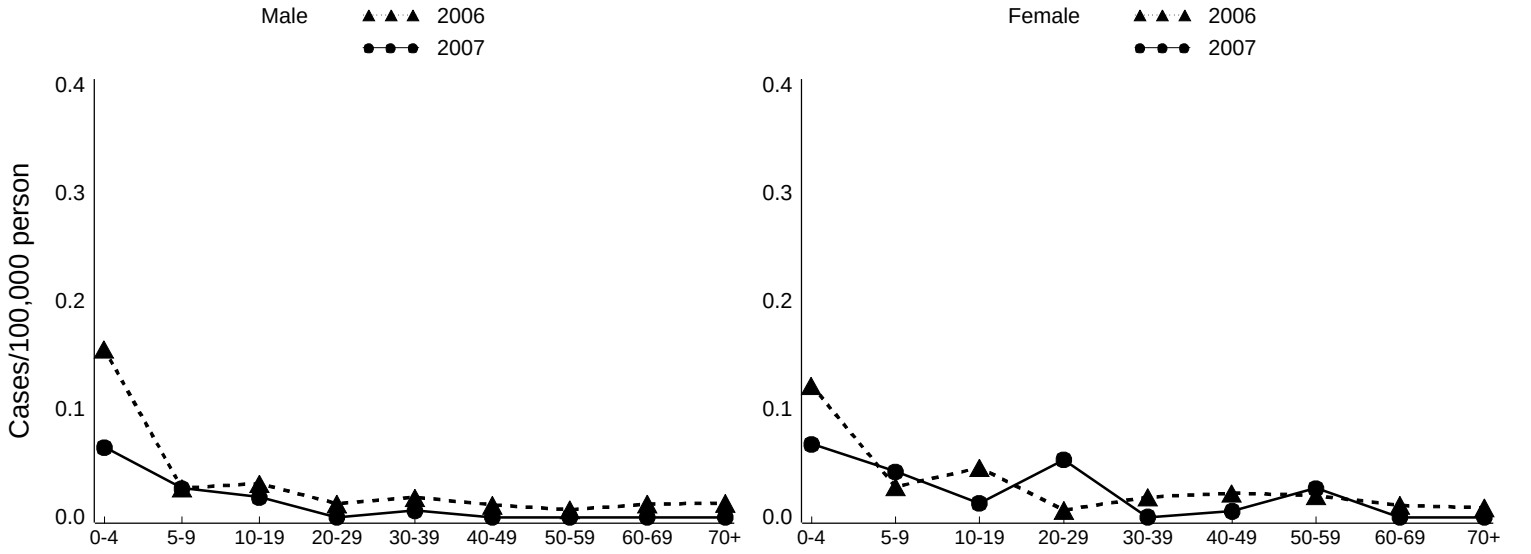


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	2	0.062	3	0.094	1	0.019
CO	9	0.348	5	0.193	1	0.046
CT	4	0.114	10	0.285	8	0.217
GA	10	0.110	6	0.066	2	0.022
MD	0	0.000	7	0.125	3	0.050
MN	3	0.058	13	0.253	5	0.102
NM	4	0.207	5	0.259	4	0.208
NY	1	0.023	9	0.209	2	0.051
OR	1	0.027	1	0.027	1	0.033
TN	1	0.017	1	0.017	0	0.007
ALL	35	0.078	60	0.133	27	0.058

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

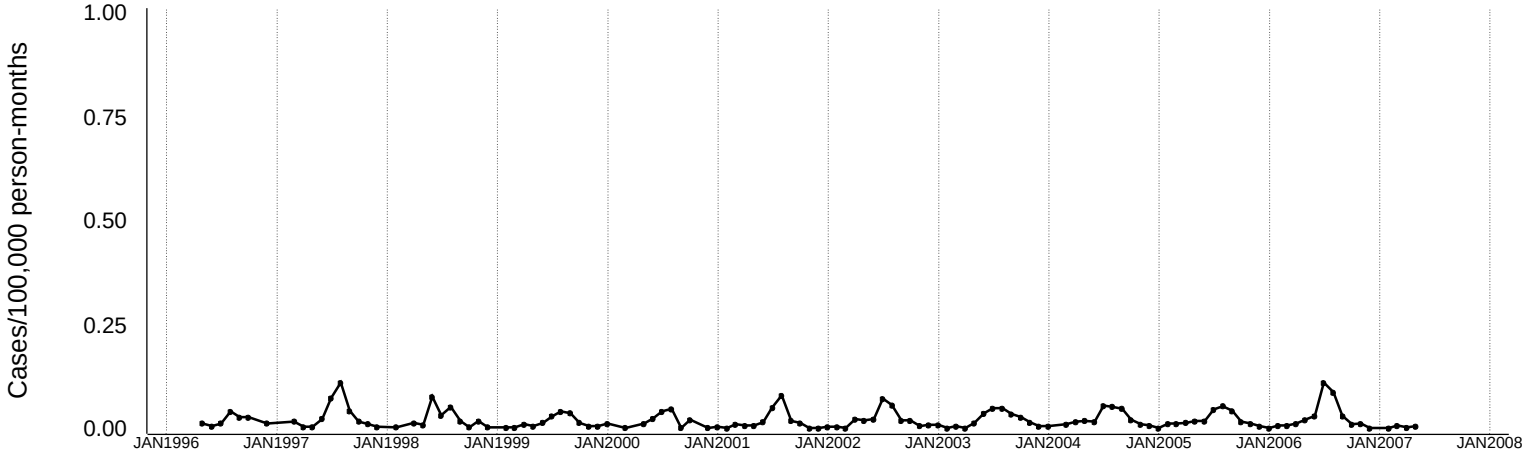


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

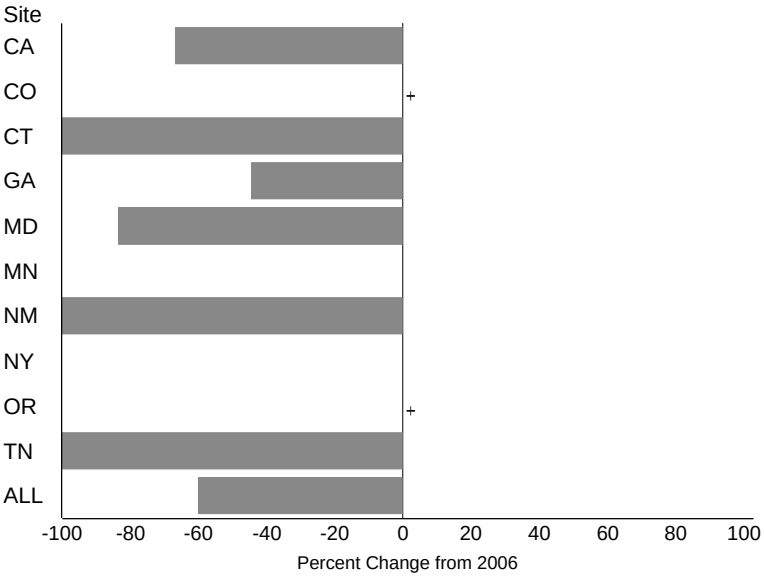
Report date: 30-July-2007

Vibrio, all species

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

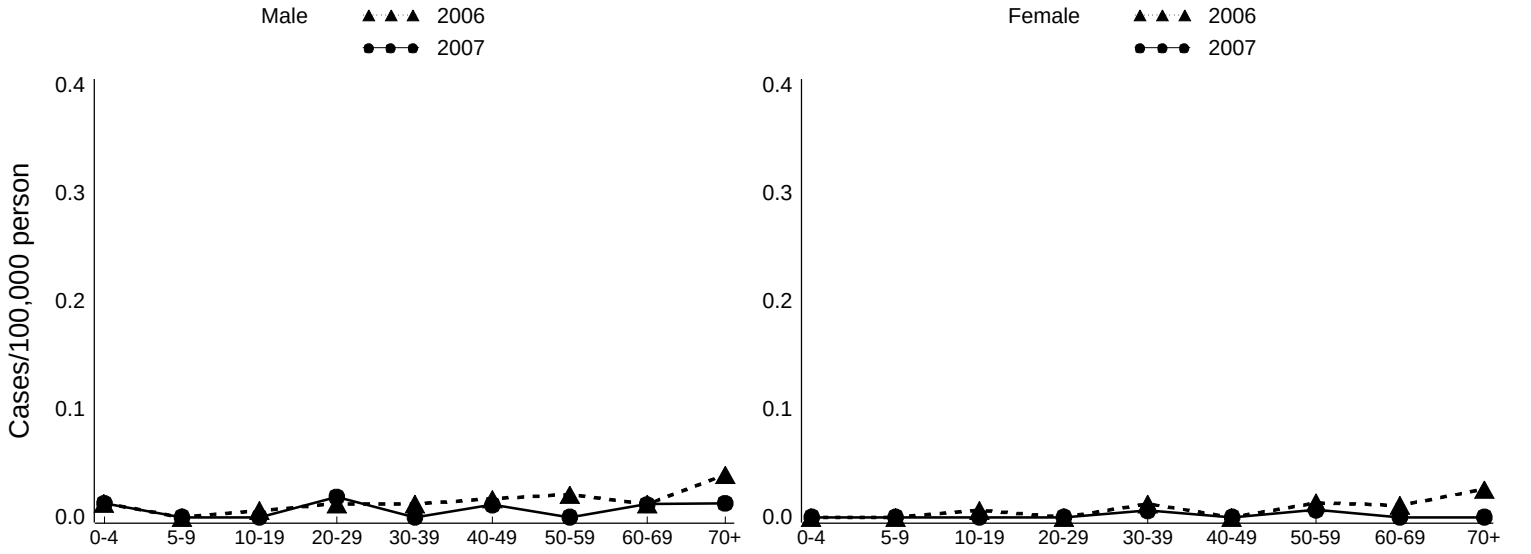


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	1	0.031	3	0.094	4	0.112
CO	1	0.039	0	0.000	1	0.023
CT	0	0.000	2	0.057	2	0.069
GA	5	0.055	9	0.099	6	0.072
MD	1	0.018	6	0.107	4	0.072
MN	1	0.019	1	0.019	2	0.035
NM	0	0.000	1	0.052	0	0.017
NY	1	0.023	1	0.023	1	0.036
OR	0	0.000	0	0.000	1	0.028
TN	0	0.000	2	0.034	2	0.038
ALL	10	0.022	25	0.056	23	0.054

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

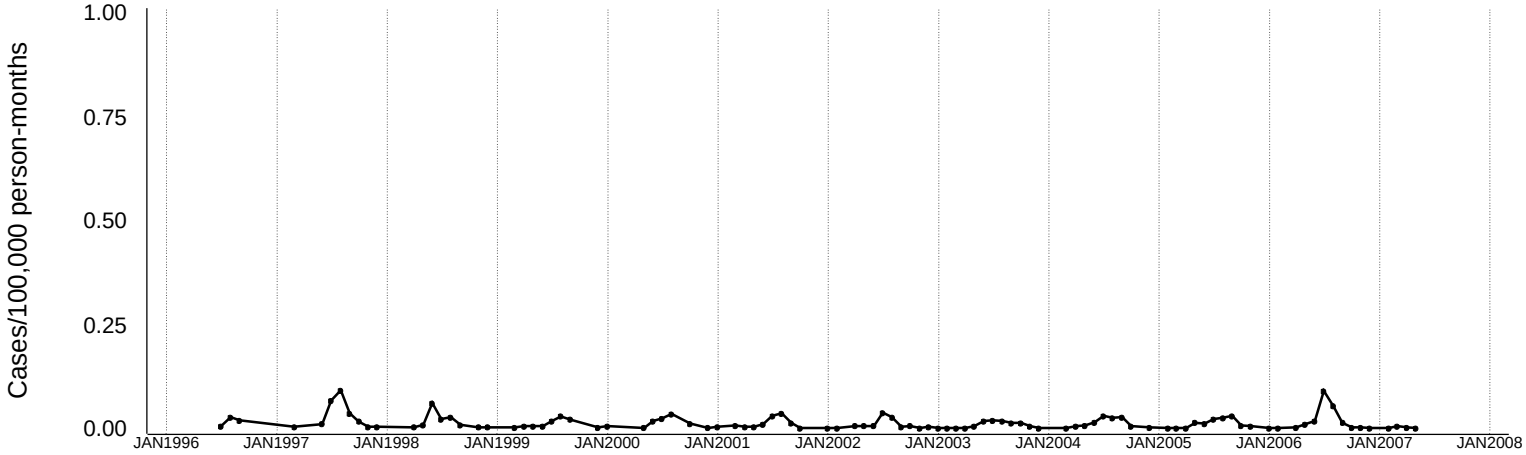


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

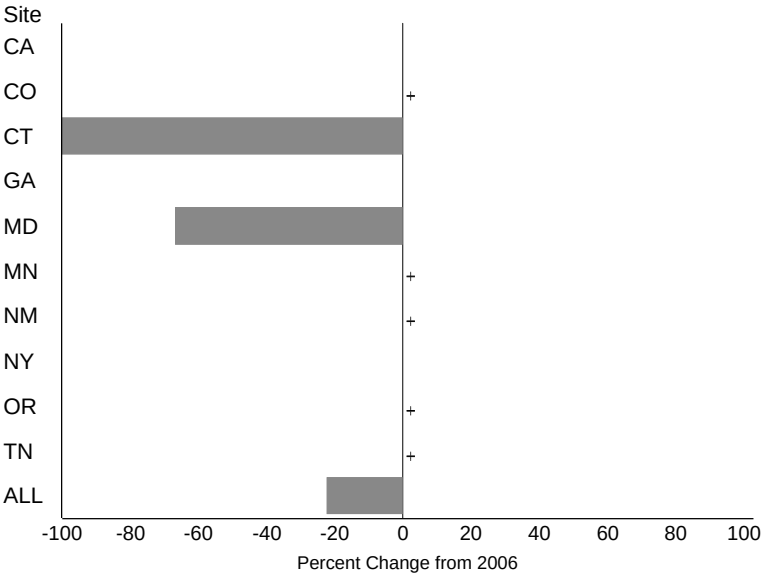
Report date: 30-July-2007

Vibrio parahaemolyticus

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

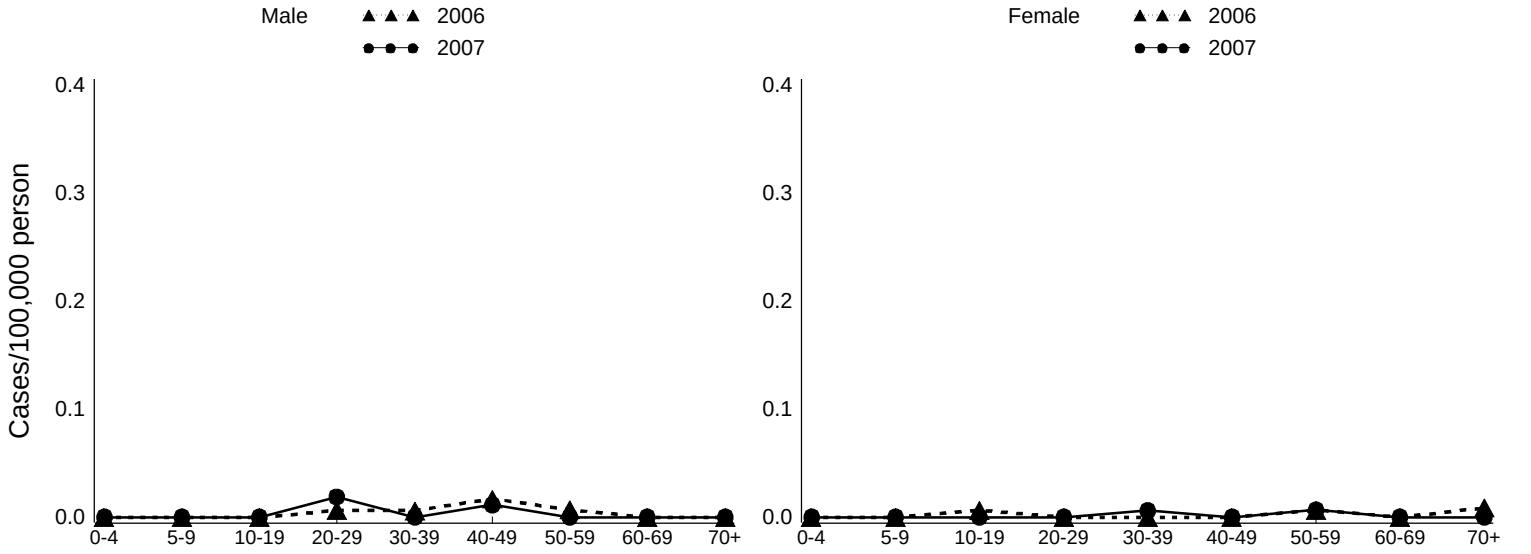


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	1	0.031	1	0.031	2	0.056
CO	1	0.039	0	0.000	0	0.015
CT	0	0.000	2	0.057	1	0.023
GA	2	0.022	2	0.022	1	0.013
MD	1	0.018	3	0.054	2	0.043
MN	1	0.019	0	0.000	0	0.008
NM	0	0.000	0	0.000	0	0.000
NY	1	0.023	1	0.023	1	0.014
OR	0	0.000	0	0.000	0	0.011
TN	0	0.000	0	0.000	0	0.007
ALL	7	0.016	9	0.020	8	0.020

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

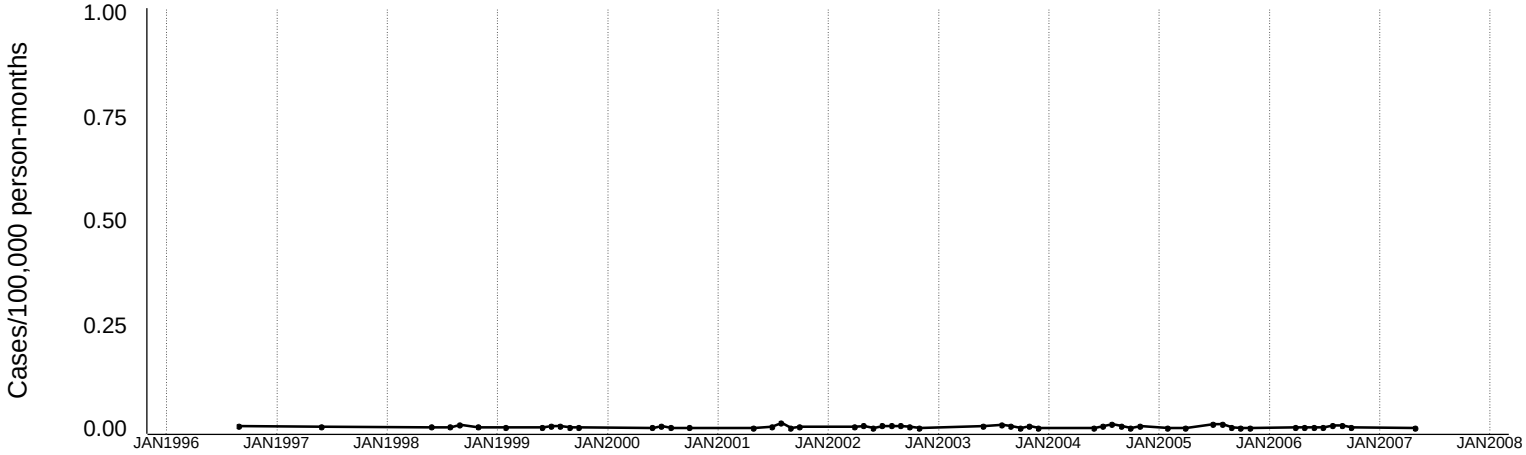


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

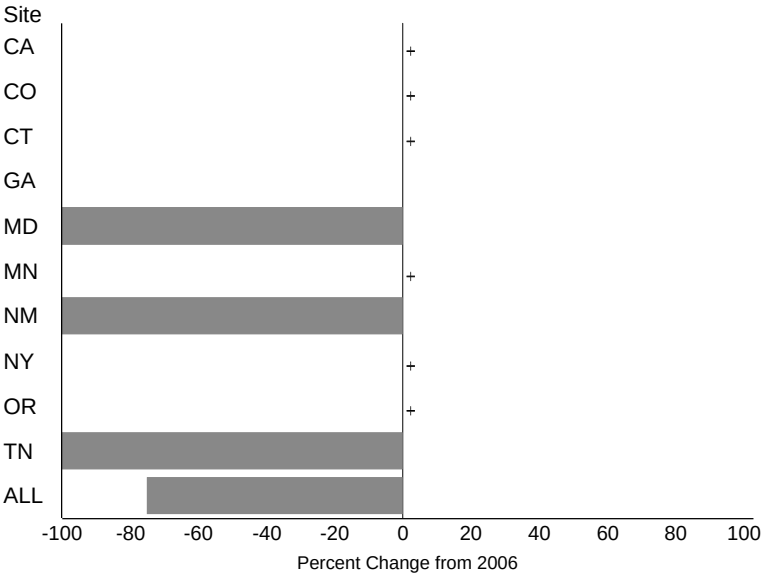
Report date: 30-July-2007

Vibrio vulnificus

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

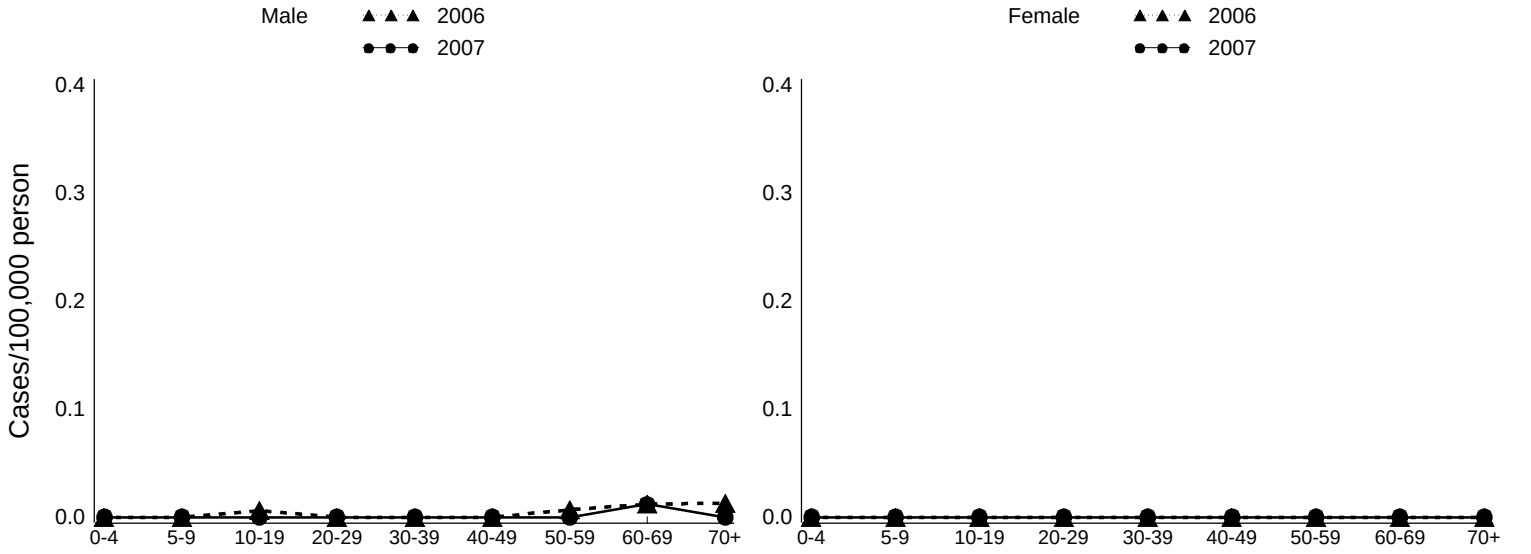


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	0	0.000	0	0.000	0	0.000
CO	0	0.000	0	0.000	0	0.000
CT	0	0.000	0	0.000	0	0.000
GA	1	0.011	1	0.011	1	0.009
MD	0	0.000	1	0.018	0	0.007
MN	0	0.000	0	0.000	0	0.004
NM	0	0.000	1	0.052	0	0.017
NY	0	0.000	0	0.000	0	0.000
OR	0	0.000	0	0.000	0	0.006
TN	0	0.000	1	0.017	0	0.010
ALL	1	0.002	4	0.009	2	0.005

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

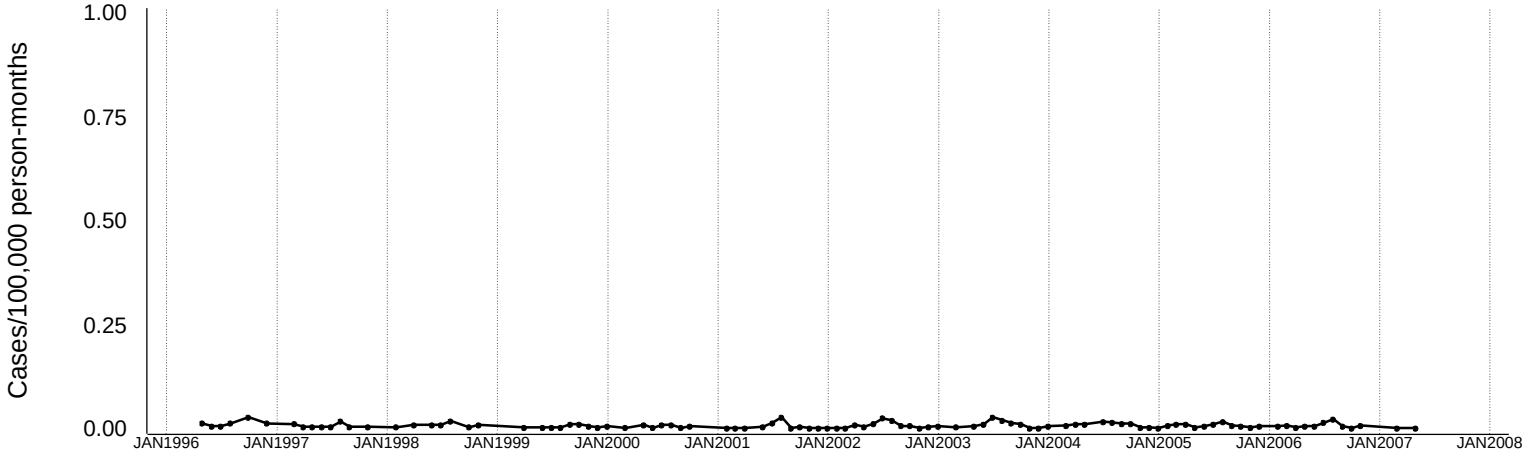


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

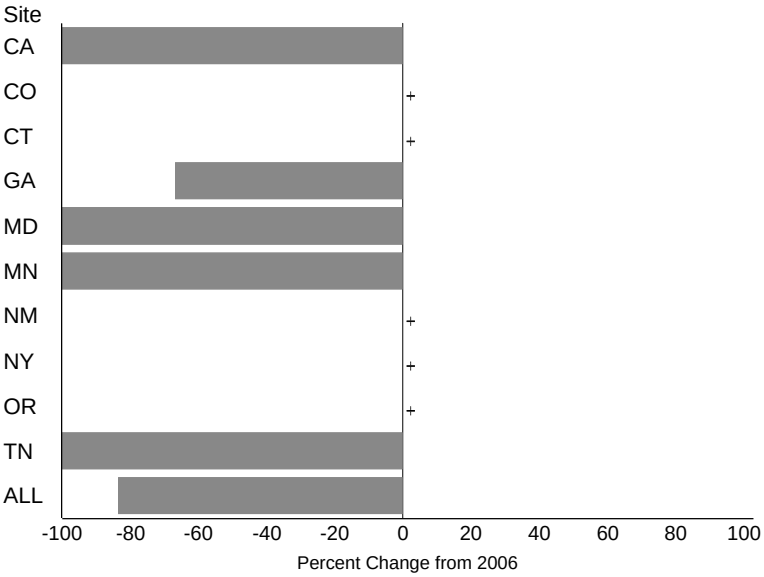
Report date: 30-July-2007

Vibrio, all others

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

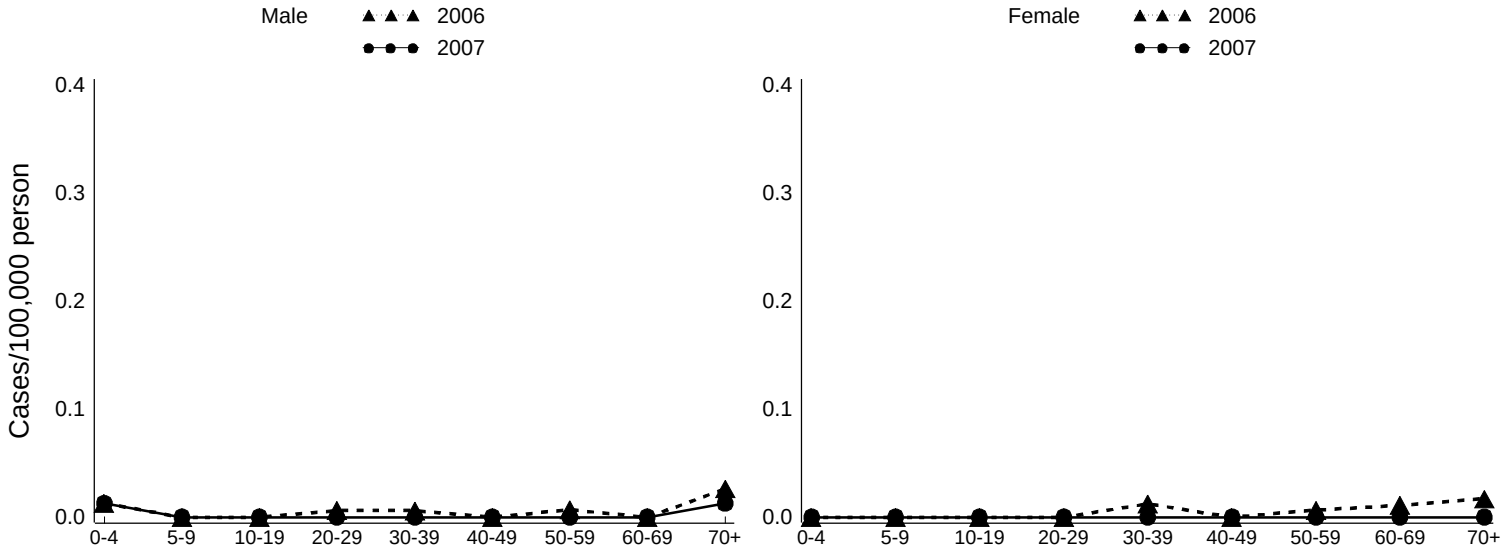


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	0	0.000	2	0.062	2	0.056
CO	0	0.000	0	0.000	0	0.008
CT	0	0.000	0	0.000	2	0.046
GA	2	0.022	6	0.066	4	0.049
MD	0	0.000	2	0.036	1	0.022
MN	0	0.000	1	0.019	1	0.023
NM	0	0.000	0	0.000	0	0.000
NY	0	0.000	0	0.000	1	0.022
OR	0	0.000	0	0.000	0	0.011
TN	0	0.000	1	0.017	1	0.020
ALL	2	0.004	12	0.027	13	0.029

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

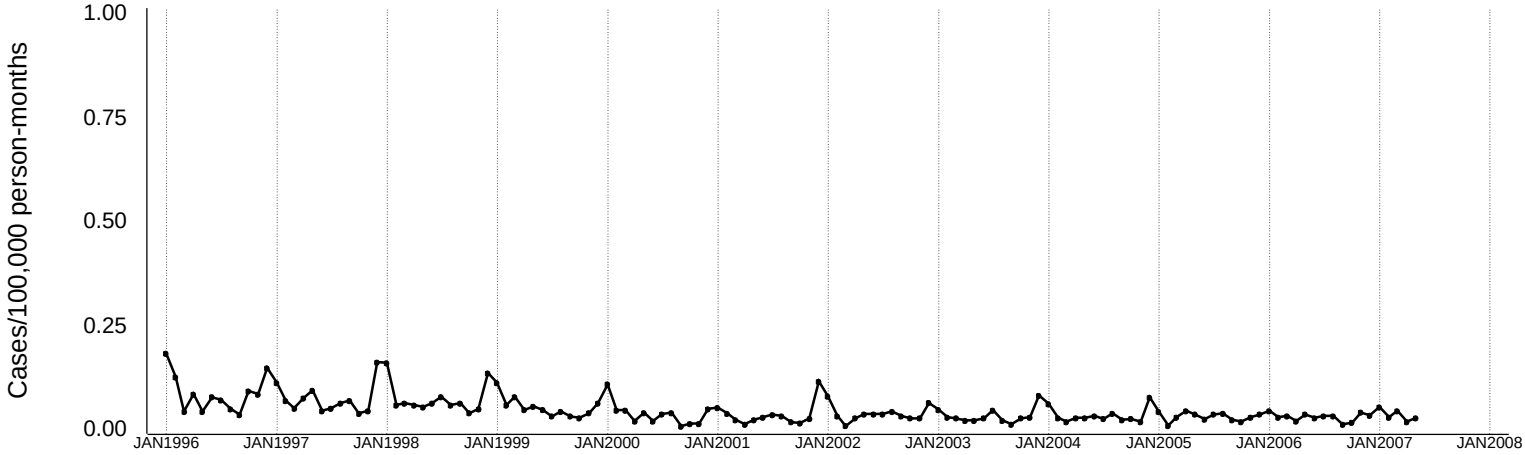


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

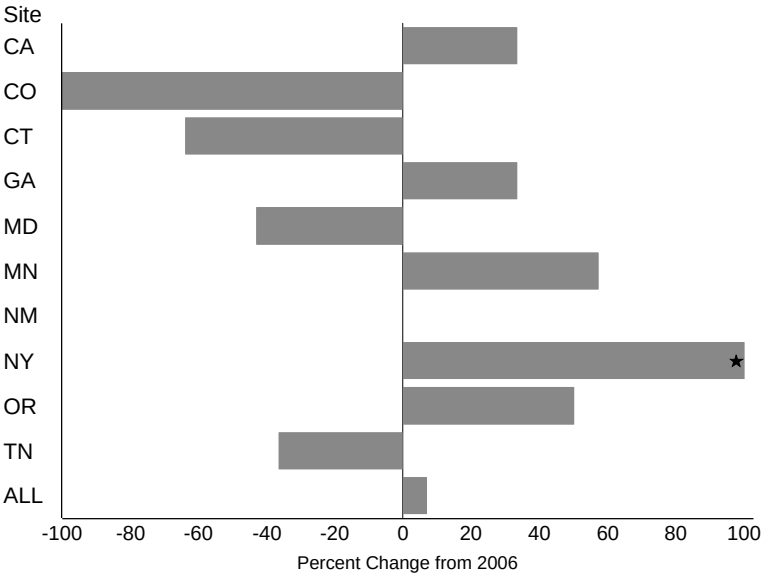
Report date: 30-July-2007

Yersinia

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

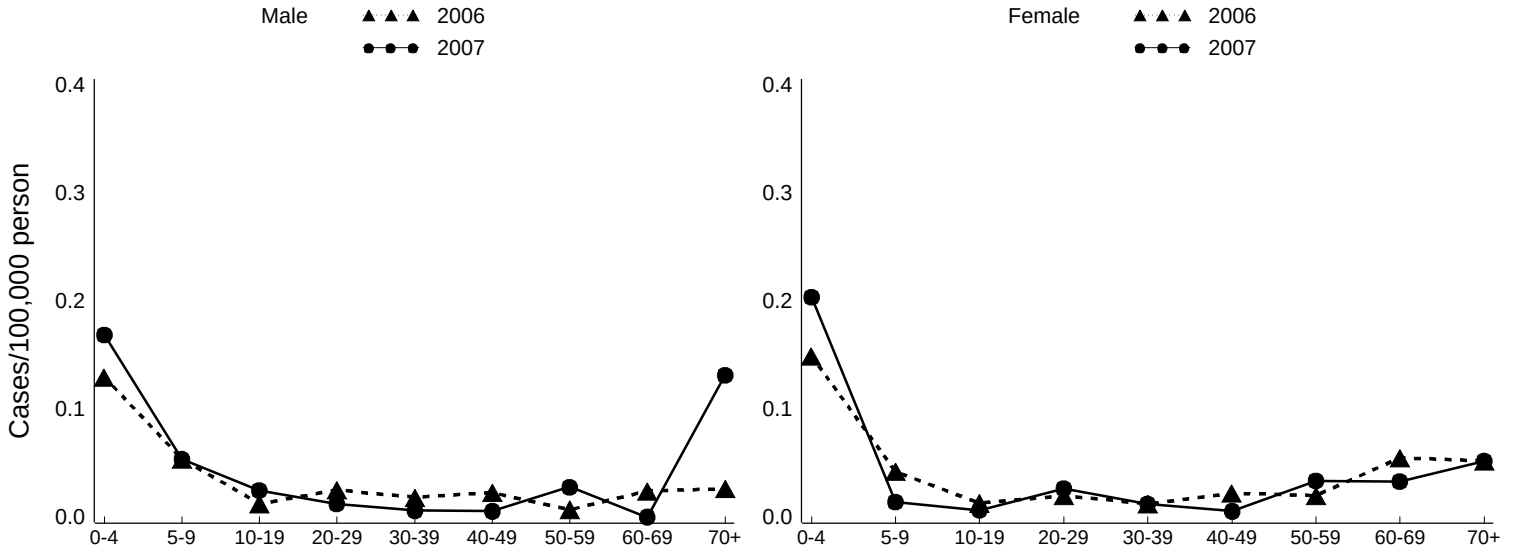


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	8	0.250	6	0.187	8	0.262
CO	0	0.000	2	0.077	2	0.086
CT	4	0.114	11	0.313	7	0.195
GA	24	0.265	18	0.198	19	0.210
MD	4	0.071	7	0.125	4	0.076
MN	11	0.214	7	0.136	6	0.122
NM	1	0.052	1	0.052	1	0.052
NY	6	0.139	1	0.023	5	0.120
OR	12	0.330	8	0.220	6	0.178
TN	7	0.117	11	0.184	11	0.215
ALL	77	0.171	72	0.160	69	0.161

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

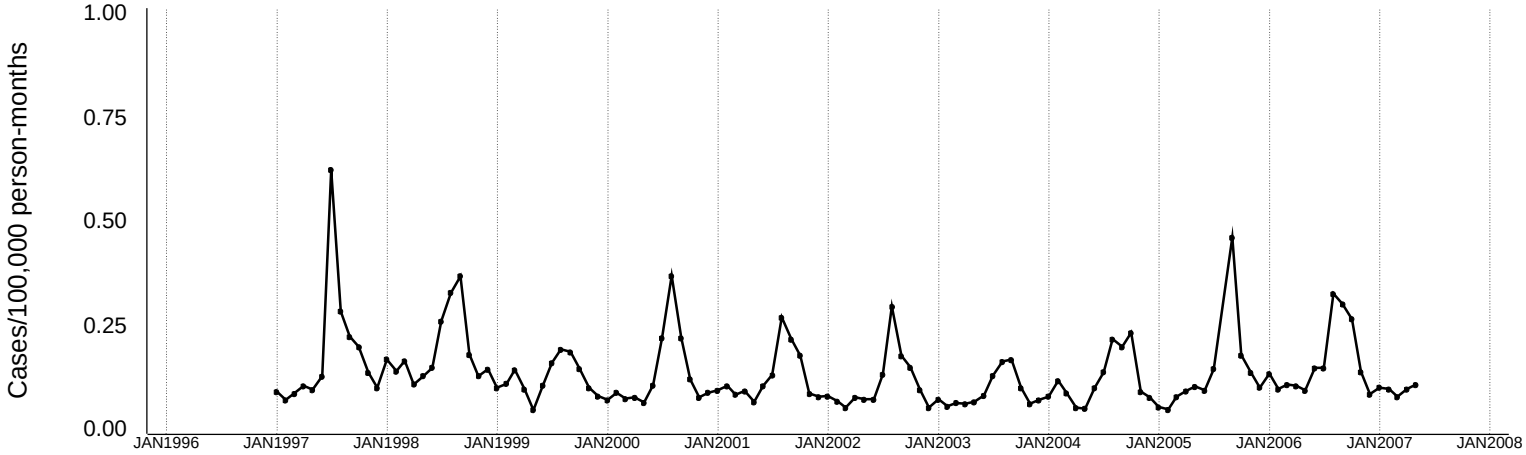


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

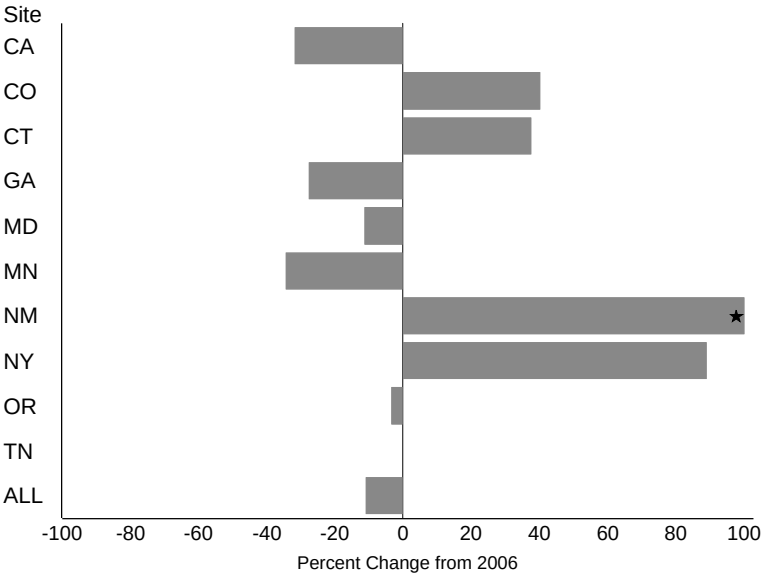
Report date: 30-July-2007

Cryptosporidium

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

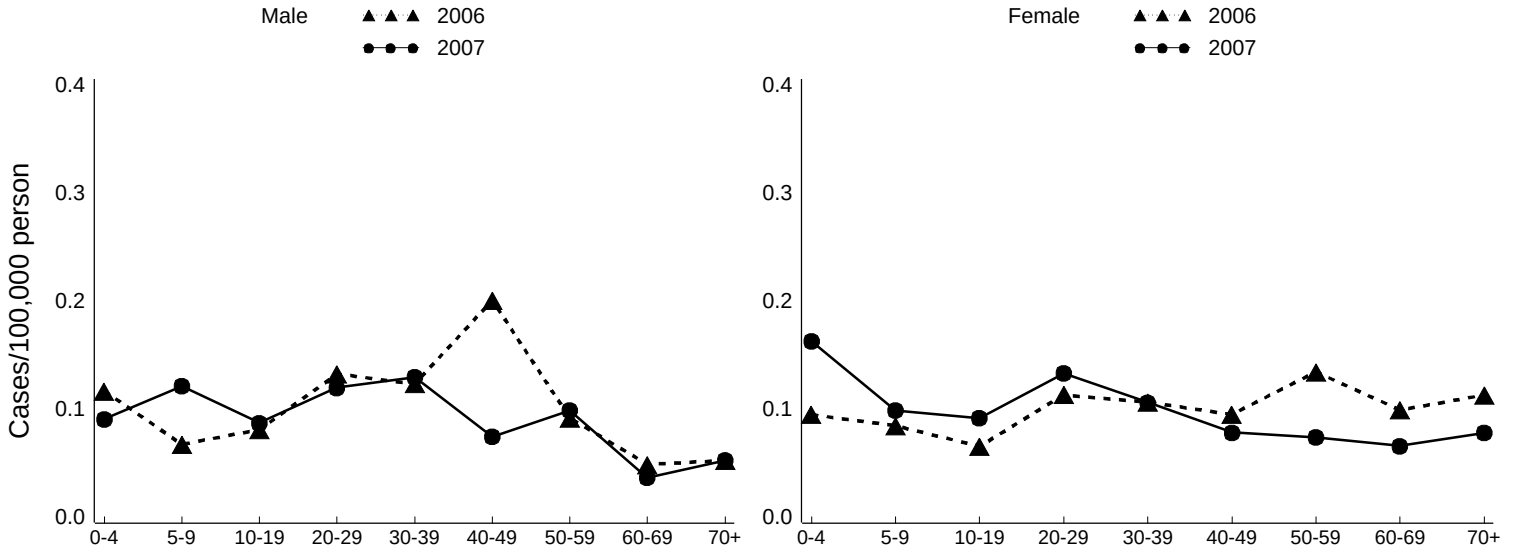


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	13	0.405	19	0.593	19	0.498
CO	7	0.271	5	0.193	6	0.227
CT	11	0.313	8	0.228	6	0.172
GA	50	0.551	69	0.761	48	0.535
MD	8	0.143	9	0.161	7	0.123
MN	48	0.935	73	1.422	45	0.879
NM	21	1.089	8	0.415	5	0.260
NY	17	0.395	9	0.209	9	0.227
OR	29	0.796	30	0.824	19	0.517
TN	10	0.168	10	0.168	10	0.201
ALL	214	0.476	240	0.534	174	0.391

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex

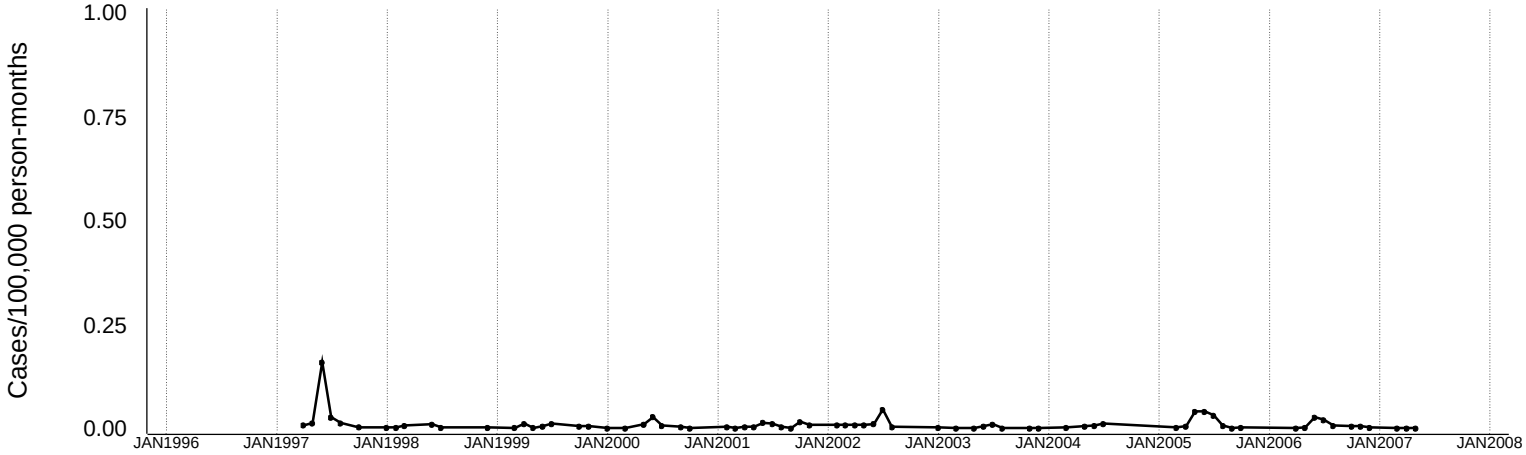


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

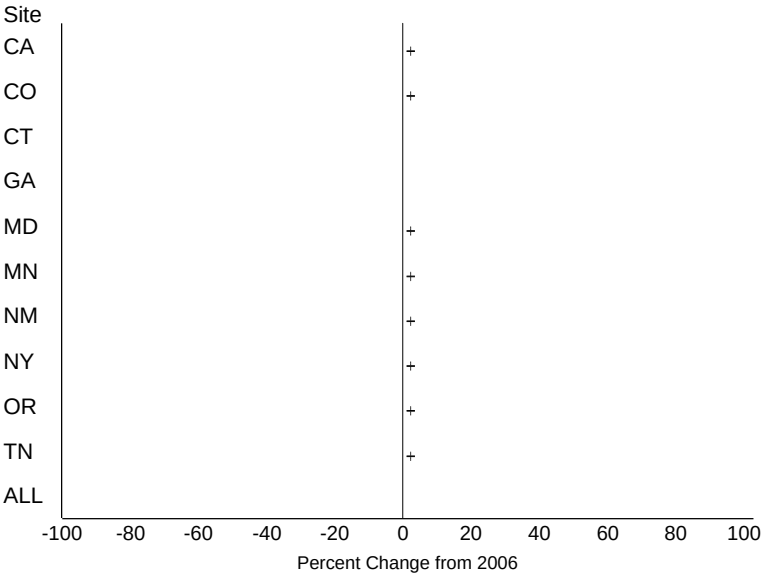
Report date: 30-July-2007

Cyclospora

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-May 2007



Calendar year through May: Percent change in rates between 2006 and 2007 by site

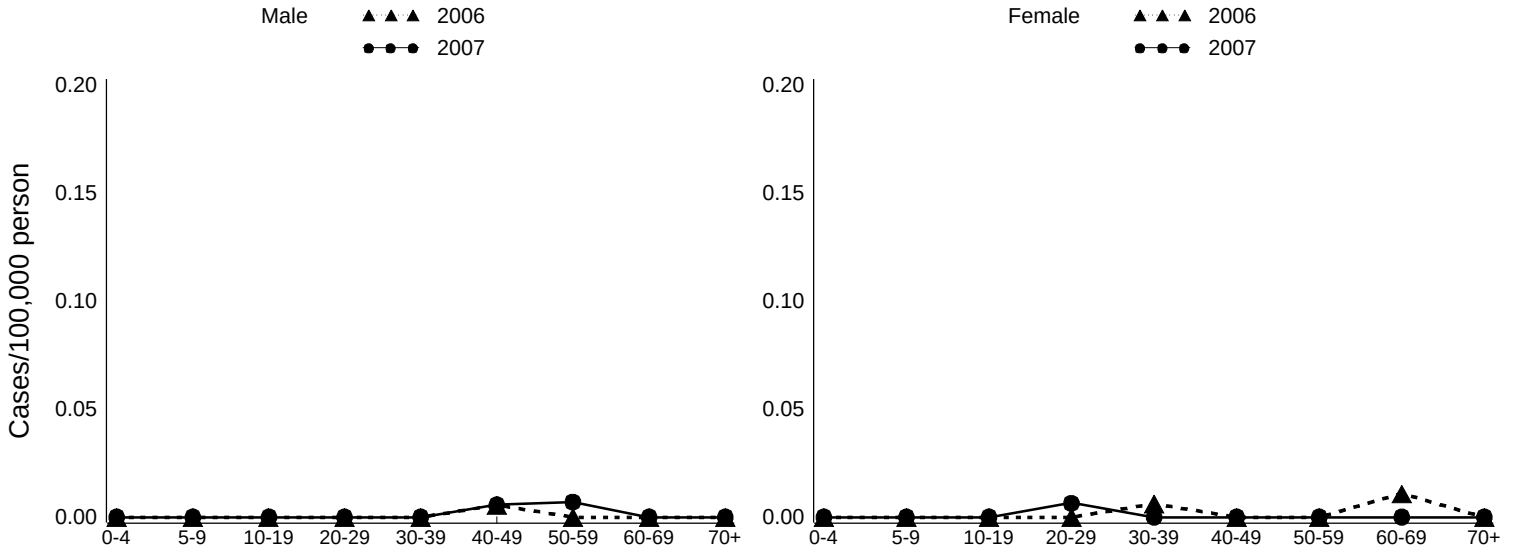


* Change exceeds 100%, +Percent increase cannot be calculated because 2006 rate is 0

	2007		2006		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	0	0.000	0	0.000	1	0.013
CO	0	0.000	0	0.000	0	0.008
CT	2	0.057	2	0.057	3	0.097
GA	1	0.011	1	0.011	4	0.045
MD	0	0.000	0	0.000	1	0.014
MN	0	0.000	0	0.000	0	0.000
NM	0	0.000	0	0.000	1	0.052
NY	0	0.000	0	0.000	0	0.005
OR	0	0.000	0	0.000	0	0.000
TN	0	0.000	0	0.000	1	0.014
ALL	3	0.007	3	0.007	11	0.024

*year 2002-2006 except for NM (2004-2006)
^cases/100,000 person

Calendar year through May: Rates for 2006 and 2007 by age group and sex



Data source: Preliminary FoodNet data, subject to change, not for public distribution.

Report date: 30-July-2007

Table 1. Summary of Foodborne Outbreaks with ≥ 2 ill, by FoodNet Year, 1998-2006
(Data accessed June 28th, 2007 (eFORS 2) PRELIMINARY DATA)

	Outbreaks reported	Rate/1,000,000 population	Median Number Ill	Known Etiology* No. (%)	Known Vehicle** No. (%)	Restaurant-associated*** No. (%)
1998	231	11.15	19	85 (37)	128 (55)	149 (65)
1999	258	8.54	17	117 (45)	135 (52)	162 (63)
2000	290	9.46	29	150 (51)	132 (46)	174 (60)
2001	266	7.62	25	200 (75)	154 (58)	164 (62)
2002	250	5.89	18	188 (75)	129 (52)	165 (66)
2003	226	5.40	19	191 (85)	118 (52)	142 (63)
2004	256	5.80	18	220 (86)	150 (59)	151 (59)
2005	209	4.60	19	182 (87)	160 (64)	148 (71)
2006	291	6.47	15	244 (84)	153 (53)	187(64)

*Known etiology- Confirmed and suspected etiologies **Known vehicle- Any vehicle reported ***Restaurant-associated- food item was prepared in a restaurant or deli

*Known etiology- Confirmed and suspected etiologies
**Known vehicle- Any vehicle reported
***Restaurant-associated- Any outbreak where food item was prepared in a restaurant or deli

Table 1. Summary of Foodborne Outbreaks with ≥ 2 ill, by FoodNet Site, 2007
(Data accessed August 1st, 2007 (eFORS 2) PRELIMINARY DATA)

State	Outbreaks reported	2005 population	Rate/1,000,000 population	Median Number Ill	Known Etiology* No. (%)	Etiology (confirmed and suspected)	Known Vehicle** No. (%)	Restaurant-associated*** No. (%)
CA	3	3,206,118	0.94	18	2 (67)	Bacillus Cerus/ Clostridium perfringens(1) *Campylobacter*(1)	1 (33)	2(67)
CO	7	2,586,568	2.71	10	5 (71)	Norovirus(5)	3 (43)	6 (86)
CT	10	3,510,297	2.85	14	7 (70)	Norovirus (6) STEC O157 (1)	9 (90)	7 (70)
GA	13	9,072,576	1.43	17	11 (85)	Clostridium perfringens(3), Norovirus(4), *Salmonella*(4)	7(54)	5 (38)
MD	14	5,600,388	2.50	22	8 (57)	Norovirus(5), *Campylobacter*(1) Clostridium perfringens(1) *Salmonella*(1)	9(64)	7 (50)
MN	20	5,132,799	3.90	12	16 (80)	Hep A(2), Norovirus(5), Clostridium perfringens(3), *Salmonella*(2), STEC O157 (1) Scromboid toxin(1)	6 (30)	13 (65)
NM	0	1,928,384	0.00	0	- (-)		- (-)	-(-)
NY	4	4,307,911	0.93	14	2(50)	Norovirus(1), STEC O157 (1)	4(100)	0 (-)
OR	5	3,641,056	1.37	31	5 (100)	Clostridium perfringens (1), Norovirus (4)	- (-)	2 (40)
TN	12	5,962,959	2.01	12	11 (93)	Norovirus (7) *Salmonella*(1), Bacillus Cerus(1) Staph aureus(2)	3 (25)	11 (92)
Total	**88**	**44,949,056**	**1.96**	**15**	**67 (76)**		**42 (48)**	**53 (60)**

*Known etiology- Confirmed and suspected etiologies
**Known vehicle- Any vehicle reported
***Restaurant-associated- Any outbreak where food item was prepared in a restaurant or deli

*Known etiology- Confirmed and suspected etiologies
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Table 2. Summary of Foodborne Outbreaks with ≥ 10 ill, by FoodNet Year, 1998-2006
(Data accessed June 28th, 2007 (eFORS 2) PRELIMINARY DATA)

	Outbreaks reported	Rate/1,000,000 population	Median Number Ill	Known Etiology* No. (%)	Known Vehicle** No. (%)	Restaurant-associated*** No. (%)
1998	104	5.02	37	48 (46)	67 (64)	48 (46)
1999	110	4.25	33	78 (71)	60 (55)	49 (45)
2000	131	4.27	40	94 (72)	70 (53)	50 (38)
2001	129	3.70	47	110(85)	79 (61)	60 (47)
2002	129	3.40	31	188 (75)	66 (51)	67 (52)
2003	103	2.46	35	98 (95)	54 (52)	51 (50)
2004	125	2.84	32	113 (90)	81 (65)	60 (48)
2005	104	2.31	33	90 (87)	68 (65)	55 (53)
2006	147	3.27	25	128 (87)	84 (57)	84 (57)

*Known etiology- Confirmed and suspected etiologies **Known vehicle- Any vehicle reported ***Restaurant-associated- food item was prepared in a restaurant or deli

*Known etiology- Confirmed and suspected etiologies
**Known vehicle- Any vehicle reported
***Restaurant-associated- Any outbreak where food item was prepared in a restaurant or deli

Table 2. Summary of Foodborne Outbreaks with ≥10 ill, by FoodNet Site, 2007

*** Data accessed August 1st 2007 (eFORS 2)**
*** Preliminary data**

State	Outbreaks reported	2005 population	Rate/1,000,000 population	Median Number Ill	Known Etiology* No. (%)	Known Vehicle** No. (%)	Restaurant-associated*** No. (%)
CA	1	3,206,118	0.31	44	0(-)	0 (-)	0(-)
CO	3	2,586,568	1.16	17	2 (67)	2 (67)	2 (67)
CT	5	3,510,297	1.42	23	3 (60)	5 (100)	3 (60)
GA	5	9,072,576	0.55	35	4 (80)	4(80)	0 (-)
MD	6	5,600,388	1.07	47	4 (67)	4 (67)	3 (50)
MN	8	5,132,799	1.56	23	6 (75)	2 (25)	2 (25)
NM	0	1,928,384	0.00	0	-(-)	0 (-)	-(-)
NY	3	4,307,911	0.70	18	1 (33)	3 (100)	0 (-)
OR	4	3,641,056	1.10	37	4 (100)	0 (-)	1 (25)
TN	6	5,962,959	1.01	20	6 (100)	1 (17)	5 (83)
2006 Total	**41**	**44,949,056**	**0.91**	**26**	**30 (73)**	**21 (51)**	**16 (39)**

*Known etiology- Confirmed and suspected etiologies
**Known vehicle- Any vehicle reported
***Restaurant-associated- Any outbreak where food item was prepared in a restaurant or deli

HUS Surveillance, 2006 Table A

as of 8/2/07

Site	In catchment (N=100)												In catchment (N=100)											
	<1 yo		1-4 yo		5-9 yo		10-14 yo		15-59 yo		60+ yo		<1 yo		1-4 yo		5-9 yo		10-14 yo		15-59 yo		60+ yo	
	No.	Deaths (%)	No.	Deaths (%)	No.	Deaths (%)	No.	Deaths (%)	No.	Deaths (%)	No.	Deaths (%)	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*
CA	0	--	5	0 (0)	2	0 (0)	0	--	2	1 (50)	0	--	0	0.0	5	2.9	2	1.0	0	0.0	2	0.1	0	0.0
CO	0	0 (0)	5	0 (0)	0	--	0	--	0	--	0	--	0	0.0	5	3.1	0	0.0	0	0.0	0	0.0	0	0.0
CT	0	--	3	0 (0)	1	0 (0)	1	0 (0)	0	--	0	--	0	0.0	3	1.8	1	0.4	1	0.4	0	0.0	0	0.0
GA	1	0 (0)	6	0 (0)	1	0(0)	0	--	2	0 (0)	0	--	1	0.7	6	1.1	1	0.2	0	0.0	2	0.0	0	0.0
MD	0	--	3	0 (0)	0	--	0	--	0	--	1	1 (100)	0	0.0	3	1.0	0	0.0	0	0.0	0	0.0	1	0.1
MN	0	--	9	0(0)	3	0 (0)	1	0 (0)	3	0 (0)	3	1 (33)	0	0.0	9	3.4	3	0.9	1	0.3	3	0.1	3	0.4
NM	0	--	4	0 (0)	0	--	1	0 (0)	0	--	0	--	0	0.0	4	3.7	0	0.0	1	0.7	0	0.0	0	0.0
NY	0	--	0	--	1	0 (0)	1	0 (0)	2	1 (50)	1	0 (0)	0	0.0	0	0.0	1	0.4	1	0.3	2	0.1	1	0.1
OR	0	--	6	0 (0)	0	--	2	0 (0)	3	0 (0)	0	--	0	0.0	6	3.3	0	0.0	2	0.8	3	0.1	0	0.0
TN	1	0(0)	19	0(0)	3	0(0)	3	0 (0)	1	0 (0)	0	--	1	1.3	19	6.2	3	0.8	3	0.8	1	0.0	0	0.0
Total	**2**	0 (0)	**60**	0 (0)	**11**	**0 (0)**	**9**	**0 (0)**	**13**	**2 (15)**	**5**	**2 (40)**	**2**	0.30	**60**	2.49	**11**	0.38	**9**	0.29	**13**	0.05	**5**	0.1

*per 100,000 persons

Results of microbiologic testing for STEC infection among HUS cases, 2006

as of 8/2/07

	Site																							
	CA		CO		CT		GA		MD		MN		NM		NY		OR		TN		**TOTAL**	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	**#**	**%**
Diarrhea in 3 weeks before HUS diag./	7	(78)	2	(40)	5	(100)	10	(100)	4	(100)	18	(95)	4	(80)	4	(80)	11	(100)	27	(100)	**92**	(92)
Total patients	9		5		5		10		4		19		5		5		11		27		**100**	
Stool specimen obtained/	7	(100)	1	(50)	5	(100)	10	(100)	3	(75)	18	(100)	4	(100)	4	(100)	11	(100)	25	(93)	**88**	(96)
Patients with diarrhea	7		2		5		10		4		18		4		4		11		27		**92**	
E. coli O157 Isolation																						
Stool cultured for E. coli O157/	7	(100)	1	(100)	3	(60)	10	(100)	3	(100)	18	(100)	4	(100)	4	(100)	11	(100)	24	(96)	**85**	(97)
Patients with stool specimens obtained	7		1		5		10		3		18		4		4		11		25		**88**	
E. coli O157 isolated from stool/	5	(71)	0	(0)	3	(100)	6	(60)	2	(67)	15	(83)	3	(75)	3	(75)	8	(73)	16	(67)	**61**	(72)
Patients with stool cultured for O157	7		1		3		10		3		18		4		4		11		24		**85**	
Shiga toxin + Questions																						
Stool tested for Shiga toxin/	5	(71)	1	(100)	3	(60)	10	(100)	1	(33)	18	(100)	4	(100)	0	(0)	3	(27)	10	(40)	**55**	(63)
Patients with stool specimen obtained	7		1		5		10		3		18		4		4		11		25		**88**	
Stool Shiga toxin-positive/	5	(100)	1	(100)	1	(33)	5	(50)	1	(100)	14	(78)	3	(75)	0	--	1	(33)	10	(100)	**41**	(75)
Patients with stool tested for Shiga toxin	5		1		3		10		1		18		4		0		3		10		**55**	
Non-O157 Isolation																						
Stool tested for non-O157 STEC/	0	(0)	1	(100)	1	(33)	7	(70)	1	(100)	3	(17)	1	(25)	0	--	0	(0)	0	(0)	**14**	(25)
Patients with stool tested for Shiga toxin	5		1		3		10		1		18		4		0		3		10		**55**	
Non-O157* STEC isolated from stool/	0	--	1	(100)	0	(0)	0	(0)	0	(0)	1	(33)	0	(0)	0	--	0	--	0	--	**2**	(14)
Stool tested for non-O157 STEC	0		1		1		7		1		3		1		0		0		0		**14**	
Serum																						
Serum Tested/	2	(100)	1	(100)	3	(100)	3	(75)	0	--	5	(100)	0	(0)	0	(0)	6	(86)	11	(100)	**31**	(89)
Serum Collected	2		1		3		4		0		5		1		1		7		11		**35**	
O157/Tested	2	(100)	1	(100)	2	--	1	(33)	0	--	2	(40)	0	--	0	--	6	(100)	9	(82)	**23**	(74)
	2		1		3		3		0		5		0		0		6		11		**31**	
Total Stool																						
O157, non-O157 STEC, Shiga toxin +/	7	(100)	1	(100)	5	(100)	10	(100)	3	(100)	18	(100)	5	(100)	5	(100)	11	(100)	26	(100)	**91**	(100)
Total stool specimens tested	7		1		5		10		3		18		5		5		11		26		**91**	

Non-O157 identified:

*Culture:O121 (1), O145 (1)

HUS Surveillance, 2007 Table A

as of 8/2/07

Site	In catchment (N=35)												In catchment (N=35)											
	<1 yo		1-4 yo		5-9 yo		10-14 yo		15-59 yo		60+ yo		<1 yo		1-4 yo		5-9 yo		10-14 yo		15-59 yo		60+ yo	
	No.	Deaths (%)	No.	Deaths (%)	No.	Deaths (%)	No.	Deaths (%)	No.	Deaths (%)	No.	Deaths (%)	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*	No.	Rate*
CA	2	0 (0)	1	0 (0)	0	--	0	--	0	--	0	--	2	4.7	1	0.6	0	0.0	0	0.0	0	0.0	0	0.0
CO	0	--	1	0 (0)	0	--	0	--	0	--	0	--	0	0.0	1	0.6	0	0.0	0	0.0	0	0.0	0	0.0
CT	0	--	0	--	1	0 (0)	2	0 (0)	0	--	0	--	0	0.0	0	0.0	1	0.4	2	0.8	0	0.0	0	0.0
GA	0	--	2	0 (0)	0	--	1	0 (0)	0	--	0	--	0	0.0	2	0.4	0	0.0	1	0.2	0	0.0	0	0.0
MD	0	--	0	--	0	--	0	--	0	--	0	--	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
MN	0	--	0	--	1	0 (0)	0	--	0	--	1	0 (0)	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	1	0.1
NM	0	--	0	--	0	--	0	--	0	--	0	--	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
NY	2	0 (0)	2	0 (0)	0	--	0	--	1	0 (0)	3	0 (0)	2	4.3	2	1.1	0	0.0	0	0.0	1	0.0	2	0.4
OR	0	--	4	0 (0)	0	--	0	--	1	0 (0)	0	--	0	0.0	4	2.2	0	0.0	0	0.0	1	0.0	0	0.0
TN	0	--	8	0 (0)	1	0 (0)	1	0 (0)	0	--	0	--	0	0.0	8	2.6	1	0.3	1	0.3	0	0.0	0	0.0
Total	**4**	**0 (0)**	**18**	**0 (0)**	**3**	**0 (0)**	**4**	**0 (0)**	**2**	**0 (0)**	**4**	**0 (0)**	**4**	0.66	**18**	0.75	**3**	0.10	**4**	0.13	**2**	0.01	**3**	0.05

*per 100,000 persons

Results of microbiologic testing for STEC infection among HUS cases, 2007

as of 8/2/07

	Site																							
	CA		CO		CT		GA		MD		MN		NM		NY		OR		TN		**TOTAL**	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	**#**	**%**
Diarrhea in 3 weeks before HUS diag./	1	(33)	1	(100)	2	(67)	3	(100)	0	--	2	(100)	0	--	7	(88)	5	(100)	9	(90)	**30**	(86)
Total patients	3		1		3		3		0		2		0		8		5		10		**35**	
Stool specimen obtained/	1	(100)	0	(0)	1	(50)	3	(100)	0	--	2	(100)	0	--	7	(100)	1	(20)	7	(78)	**22**	(73)
Patients with diarrhea	1		1		2		3		0		2		0		7		5		9		**30**	
E. coli O157 Isolation																						
Stool cultured for E. coli O157/	1	(100)	0	--	1	(100)	2	(67)	0	--	2	(100)	0	--	7	(100)	1	(100)	5	(71)	**19**	(86)
Patients with stool specimens obtained	1		0		1		3		0		2		0		7		1		7		**22**	
E. coli O157 isolated from stool/	1	(100)	0	--	1	(100)	1	(50)	0	--	0	(0)	0	--	4	(57)	1	(100)	3	(60)	**11**	(58)
Patients with stool cultured for O157	1		0		1		2		0		2		0		7		1		5		**19**	
Shiga toxin + Questions																						
Stool tested for Shiga toxin/	1	(100)	0	--	0	(0)	1	(33)	0	--	2	(100)	0	--	4	(57)	0	(0)	3	(43)	**11**	(50)
Patients with stool specimen obtained	1		0		1		3		0		2		0		7		1		7		**22**	
Stool Shiga toxin-positive/	1	(100)	0	--	0	--	1	(100)	0	--	0	(0)	0	--	2	(50)	0	--	1	(33)	**5**	(45)
Patients with stool tested for Shiga toxin	1		0		0		1		0		2		0		4		0		3		**11**	
Non-O157 Isolation																						
Stool tested for non-O157 STEC/	0	(0)	0	--	0	--	1	(100)	0	--	0	(0)	0	--	2	(50)	0	--	0	(0)	**3**	(27)
Patients with stool tested for Shiga toxin	1		0		0		1		0		2		0		4		0		3		**11**	
Non-O157* STEC isolated from stool/	0	--	0	--	0	--	0	(0)	0	--	0	--	0	--	0	(0)	0	--	0	--	**0**	(0)
Stool tested for non-O157 STEC	0		0		0		1		0		0		0		2		0		0		**3**	
Serum																						
Serum Tested/	1	(100)	0	--	0	--	0	(0)	0	--	1	(100)	0	--	0	--	0	--	0	--	**2**	(33)
Serum Collected	1		0		0		2		0		1		0		0		0		2		**6**	
O157/Tested	0	(0)	0	--	0	--	0	--	0	--	1	(100)	0	--	0	--	0	--	0	--	**1**	(50)
	1		0		0		0		0		1		0		0		0		0		**2**	
Total Stool																						
O157, non-O157 STEC, Shiga toxin +/	2	(100)	0	--	2	(100)	2	(67)	0	--	2	(100)	0	--	6	(100)	0	--	5	(100)	**19**	(95)
Total stool specimens tested	2		0		2		3		0		2		0		6		0		5		**20**	

Non-O157 identified:

*Culture: