Infectious Disease Epidemiology, Prevention, and Control (IDEPC) Division number	651.201.5414	
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Foodborne Illness Hotline	1.877.FOOD ILL (Local: 651.201.5655)	foodill@health.state.mn.us
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FoodNet Active Manuscripts

Status	#	Lead	Coauthors	Title	DoC	Comment
10						
	123	Green, Laura	Selman, Carol, Jones, Timothy F., Scallan, Elaine, Marcus, Ruthanne, The EHS-Net Population Survey Working Group	Beliefs About Meals Eaten Outside the Home as Sources of Gastrointestinal Illness	8/4/2004	
	367	Gupta, Amita	Tauxe, Robert V., Angulo, Fredrick J.	Authors' Response to Peter Collignon's Letter in Emerging Infectious Diseases		
8						
	108	Frenzen, Paul D.	Drake, Allison, Angulo, Fredrick J.	The Economic Cost of E. coli O157:H7 infections	7/14/2004	Accepted by Journal of Food Pr
	122	Koehler, Kathleen M.	Lasky, Tamar, Fein, Sara B., DeLong, Stephanie M., Hawkins, Marguerite A., Rabatsky-Ehr, Therese R., Ray, Susan M., Shiferaw, Beletshachew, Swanson, Ellen, Vugia, Duc J., EIP FoodNet Working Group	Population-Based Incidence of Infection with Selected Enteric Bacterial Pathogens for Children < 5 Years of Age, FoodNet, 1996-1998	7/2/2004	
7						
	120	Devasia, Rose	Varma, Jay K., Whichard, Jean M., Gettner, Sharmeen, Cronquist, Alicia B., Hurd, Sharon, Segler, Suzanne D., Smith, Kirk E., Hoefer, Dina, Shiferaw, Beletshachew, Angulo, Fredrick J., Jones, Timothy F., EIP FoodNet Working Group	Antimicrobial Use and Outcomes in Patients with Multidrug-Resistant and Pansusceptible Salmonella Newport Infections, 2002-2003	9/3/2004	
	24	Jones, Timothy F.	Ingram, Amanda, Blythe, David, Hoefer, Dina, Vugia, Duc J., Nelson, Jennifer M., EIP FoodNet Working Group	A Case Control Study of Salmonella Infection in Infants, FoodNet, 2002-2004		
	65	Jones, Timothy F.	McMillian, Marcella B., Scallan, Elaine, Thomas, Stephanie M., Cronquist, Alicia B., Frenzen, Paul D., Angulo, Fredrick J.	A Population-Based Estimate of the Substantial Burden of Diarrheal Disease in the United States; FoodNet, 1996-2003	7/2/2004	
	118	Kennedy, Malinda	Rabatsky-Ehr, Therese R., Lance-Parker, Susan, Thomas, Stephanie M., Smith, Kirk E., Mohle-Boetani, Janet C., Keene, William E., Mead, Paul S.	Changes in Bovine Risk Factors for E. coli O157: a Case-Control Study in FoodNet Sites: 1999-2000	9/3/2004	

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FoodNet Active Manuscripts

Status	#	Lead	Coauthors	Title	DoC	Comment
	366	Klontz, Karl C.	Ailes, Elizabeth, Angulo, Fredrick J.	Recalls of Spices due to Bacterial Contamination Monitored by the U.S. Food and Drug Administration. The Predominance of Salmonellae		
	106	Marcus, Ruthanne	Moore, Matthew R., Varma, Jay K., Medus, Carlota, Marcus, Ruthanne, Crume, Tessa, Zansky, Shelley M., Boothe, Effie, Boxrud, David, Tauxe, Robert V.	Risk factors for sporadic infection caused by Salmonella Enteritidis in the United States, 2002-2003	7/2/2004	
	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	6/8/2004	
	112	Varma, Jay K.	Marcus, Ruthanne, Stenzel, Sara A., Hanna, Samir S., Gettner, Sharmeen, , Shiferaw, Beletshachew, Crume, Tessa L., Joyce, Kevin W., Angulo, Fredrick J.	Highly-resistant Salmonella Newport-MDRAmpC Transmitted Through the Domestic United States Food Supply: FoodNet Case Control Study, 2002-2003	6/8/2004	Manuscript has been submitted
6						
	124	Dunne, Eileen F.	Griffin, Patricia M., Snider, Cynthia J., 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	Pediatric Hemolytic Uremic Syndrome in the United States, 1997-2002: A Study of 379 Cases	9/3/2004	
	114	Hoefer, Dina	Malone, Shauna, Zansky, Shelley M., Marcus, Ruthanne, Frenzen, Paul D., Scallan, Elaine	Knowledge, Attitude, and Practice of the Use of Irradiation Among Respondents to the FoodNet Population Survey in Connecticut and New York		
	121	Samuel, Michael C.	Vugia, Duc J., Koehler, Kathleen M., Marcus, Ruthanne, McNees, Alexander A., Deneen, Valerie C., Damaske, Barbara, Shiferaw, Beletshachew, Hadler, James L., Angulo, Fredrick J.	Consumption of Risky Foods Among Adults at High Risk for Severe Foodborne Diseases: Room for Improved Targeted Prevention Messages	9/1/2004	
5						

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FoodNet Active Manuscripts

Status	#	Lead	Coauthors	Title	DoC	Comment
	105	Fullerton, Kathleen E.	Vugia, Duc J., Hurd, Sharon, Haubert, Nicole, Anderson, Bridget J., Shiferaw, Beletshachew, Ingram, Amanda, Hayes, Tameka, Segler, Suzanne D., Wedel, Stephanie, Henao, Olga L., Scallan, Elaine, Jones, Timothy F., Angulo, Fredrick J., EIP FoodNet Working Group	Risk Factors for Infant Campylobacter Infections: A FoodNet Case-Control Study	2/9/2005	
	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., DeWitt, Wallis, Van Gilder, Thomas J., EIP FoodNet Working Group	Listeria Monocytogenes Infection From Food in the Regulatory Era: A Case-Control Study of Risk Factors for Sporadic Illness in the United States	9/3/2004	
4						
	22	Kretsinger, Katrina	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		
	104	Scallan, Elaine	Jones, Timothy F., McMillian, Marcy, Frenzen, Paul D., Cronquist, Alicia B., Thomas, Stephanie M., Angulo, Fredrick J.	Health Care Utilization Among Persons Who Have Recently Experienced Gastrointestinal Illness	2/9/2005	
	107	Voetsch, Andrew C.		Analysis of Trends in Listeriosis in the FoodNet Sites, 1996-2003	7/14/2004	
	119	Watt, James P.	Bales, Michael, Dannenberg, Andrew L., Imhoff, Beth, Mullins, Scott R., Dowell, Scott F.	Impact of a Health-Related Internet Hoax on a Public Health Agency and the Public: Implications for Health Communication	2/27/2004	
3						
	323	DeBess, Emilio E.		Food Handler Survey: Knowledge and Attitudes of Foodborne Illnesses in Two Oregon Counties		

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FoodNet Active Manuscripts

Status	#	Lead	Coauthors	Title	DoC	Comment
	360	Voetsch, Andrew C.	Henao, Olga L., Cronquist, Alicia B., Hurd, Sharon, Thomas, Stephanie M., Scheftel, Joni M., McMillian, Marcy, Megginson, Melanie, Hatch, Julie, Angulo, Fredrick J., EIP FoodNet Working Group	Surveillance Trends for Vibrio Infections in FoodNet sites, 1996-2004		
2						
	103	Ailes, Elizabeth	Nelson, Jennifer M.	Foodborne Diseases Active Surveillance Network Surveillance Summary, 1996-2003	2/9/2005	
	115	Bair, Heather	FoodNet Education Working Group	Foodborne Diseases in the United States: Lessons Learned from FoodNet, 1996-2002	6/8/2004	
	116	Cheung, Michelle	Ray, Susan M., Shiferaw, Beletshachew,	Foodborne Pathogens Causing Illness in the First 7 Days of Life: FoodNet, 1996-2001	8/4/2004	
	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	9/3/2004	
	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		
	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		
	26	Majowicz, Shannon E.	Scallan, Elaine, Hall, Gillian, Banerjee, Anyana, Kirk, Martyn D., Angulo, Fredrick J.	Respiratory Symptoms Among Persons with Gastrointestinal Illness	2/9/2005	
	325	Shiferaw, Beletshache		Comparison of Three Surveillance Systems for Hemolytic Uremic Syndrome in Oregon		
	25	Snider, Cynthia J.	Vugia, Duc J., Burnite, Steve, Hurd, Sharon, Hayes, Tameka, Scheftel, Joni M., Smith, Glenda, Shiferaw, Beletshachew, Boothe, Effie, Griffin, Patricia M., EIP FoodNet Working Group	Post-Diarrheal Hemolytic (D+HUS) in Adults, FoodNet, 1997-2002	2/9/2004	

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FoodNet Active Manuscripts

Status	#	Lead	Coauthors	Title	DoC	Comment
1						
	326	Boxrud, David		Salmonella Enteritidis Case-Control Study PFGE Comparison		
	364	Daly, Leslie	Scallan, Elaine, Majowicz, Shannon E., Hall, Gillian, Angulo, Fredrick J.	Estimating the Duration of Illnes from Population Surveys of Acute Gastroenteritis		
	110	Frenzen, Paul D.		Consumer Interest in Irradiated Foods	8/9/2004	
	321	Hedberg, Craig W.		Look at EFORS Data from FoodNet Sites to Determine the Value of the Contributing Factors		
	88	Nelson, Jennifer M.	Hurd, Sharon	Multiple Pathogens Isolated Over a Short Period, FoodNet 1996-2002		
	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	2/15/2005	
0						
	102	Dunn, John R.		Substantial Decline in the Incidence of Escherichia coli O157:H7 Infections in FoodNet, 2003		
	322	Hoekstra, Robert M.		Protective Exposures in Matched Case-Control Studies of Foodborne Illness		
	100	Scallan, Elaine	Frenzen, Paul	The Economic Cost of Diarrheal Illness in the United States		

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2006 FoodNet Abstracts for ICEID

#	Lead	Coauthors	Title	DoC	Pres. Type
339	Anderson, Bridget J.	Hurd, Sharon, Medus, Carlota, Long, Cherie, EIP FoodNet Working Group	Characterization of Non-O157 Shiga Toxin-Producing Escherichia coli (STEC) Cases in FoodNet Surveillance in CT, MN and NY		
381	Demma, Linda	Vugia, Duc J., Hurd, Sharon, Segler, Suzanne D., Kielbauch, Julie, Leano, Fe, Dumas, Nellie B., Hatch, Julie	Trends in Campylobacter Species and Accuracy of Campylobacter Speciation in FoodNet Sites, 1997-2003		
383	Fullerton, Kathleen E.	Vugia, Duc J., Cronquist, Alicia B., Phan, Quyen, Burnett, Cindy, Larson, Kirsten, Swanson Laine, Ellen, Nicholas, David, Keene, William E., Jones, Timothy F.	Trends in Foodborne Outbreak Data, FoodNet, 1998-2004		
388	Furuno, Jon P.	Norton, Dawn M., Haubert, Nicole, Clogher, Paula, Swanson Laine, Ellen, Zansky, Shelley M., McMillian, Marcy, ,	Correlates of Campylobacter Incidence Among FoodNet Sites		
392	Greene, Sharon K.	Norton, Dawn M., Clogher, Paula, Tobin-D'Angelo, Melissa, Megginson, Melanie, Wedel, Stephanie, Edge, Karen, Morse, Dale L., Cieslak, Paul R., Ingram, Amanda, Angulo, Fredrick J.	The Emergence of Salmonella Serotype I4,[5],12:I:- in the United States		
382	Henao, Olga L.	Norton, Dawn M., Cronquist, Alicia B., Marcus, Ruthanne, Tobin-D'Angelo, Melissa, Ryan, Patricia A., Medus, Carlota, Anderson, Bridget J., Shiferaw, Beletshachew, McMillian, Marcy	Diet Diversity and Diarrheal Illness as Observed in the Foodborne Diseases Active Surveillence Network (FoodNet) Population Survey, 1996-2003		
393	Hoefer, Dina	Wymore, Katie, Marcus, Ruthanne, Tobin-D'Angelo, Melissa, Thomas, Stephanie M., Megginson, Melanie, Medus, Carlota, Cieslak, Paul R., Lindsay, Leonard C., Scallan, Elaine	Comparison of Travel-Related, Outbreak-Associated, and Sporadic Cases of Salmonellosis Among Residents of FoodNet Sites		

#	Lead	Coauthors	Title	DoC	Pres. Type
386	Hurd, Sharon	Demma, Linda, Shin, Sam, Cronquist, Alicia B., Segler, Suzanne D., Kielbauch, Julie, Swanson Laine, Ellen, Smith, Glenda, Hatch, Julie, Hanna, Samir S.	Clinical Laboratory Practices for the Identification of Campylobacter in FoodNet Sites: Do Differences Explain Variation in Incidence Rates?		
331	Long, Cherie	Hayes, Tameka, Vugia, Duc J., Ryan, Patricia A., Scheftel, Joni, Shiferaw, Beletshachew, Jones, Timothy F., Demma, Linda, Voetsch, Andrew C., EIP FoodNet Working Group	Yersenia pseudotuberculosis infections in FoodNet, 1996-2004		
26	Majowicz, Shannon E.	Scallan, Elaine, Hall, Gillian, Banerjee, Anyana, Kirk, Martyn D., Angulo, Fredrick J.	Respiratory Symptoms Among Persons with Gastrointestinal Illness	2/9/2005	
387	Marcus, Ruthanne	Shin, Sam, Vugia, Duc J., Cronquist, Alicia B., Gillespie, Jennifer, Megginson, Melanie, Wedel, Stephanie, Zansky, Shelley M., Shiferaw, Beletshachew, Ong, Kanyin Liane, Jones, Timothy F.	Risk Factors for Shigellosis Among Residents of FoodNet Sites, 2005		
394	Nelson, Jennifer M.	Nadle, Joelle, Daniels, Allison, Clogher, Paula, Gillespie, Jennifer, Furuno, Jon P., Plantenga, Melissa, Bernarczyk, Robert, Ingram, Amanda	Food Use and Policies in Long-Term Care Facilities, FoodNet, 2005		
410	Norton, Dawn M.		Outbreak of Emerging Salmonella Serotype I 4,[5],12:i:- Infections - California, 2004		
391	Ong, Kanyin Liane	Apostol, Mirasol, Burnite, Steve, Hurd, Sharon, Hayes, Tameka, Mickelson, Stephanie, Scheftel, Joni, Spina, Nancy L., Shiferaw, Beletshachew, Boothe, Effie J.	Comparison of HDD to HUS Active Surveillance and Trends in HUS		

#	Lead	Coauthors	Title	DoC	Pres. Type
407	Oosmanally, Nadine	Vugia, Duc J., Cronquist, Alicia B., Segler, Suzanne D., Smith, Perry F., Keene, William E., Jones, Jeffrey L., Angulo, Fredrick J., EIP FoodNet Working Group	Incidence of Cryptosporidium in FoodNet Sites, 1997-2004		
384	Rosenblum, Ida E.	Brooks, Susan, Hurd, Sharon, Thomas, Stephanie M., Mickelson, Stephanie, Scheftel, Joni, Hoefer, Dina, Cieslak, Paul R., Boothe, Effie J.	E. coli Travel and Outbreak Data (2005 Surveillance Data)		
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	2/15/2005	
408	Teates, Kathryn	Vugia, Duc J., Haubert, Nicole, Hurd, Sharon, Segler, Suzanne D., Wedel, Stephanie, Zansky, Shelley M., Shiferaw, Beletshachew, Jones, Timothy F.	Drug-Resistant Salmonella Among Infants, FoodNet and NARMS, 2003-2004		
343	Tobin-D'Angelo, Melis	Sharp, Lydia, Gillespie, Jennifer, Shuler, Carrie, Li, Alice, Hanna, Samir S., Schlegel, Julie H., Kanwat, C.P., Voetsch, Andrew C., EIP FoodNet Working Group	Salmonella Javiana in the Southeastern United States: A Hypothesis Generating Study		
409	Weis, Erica	Marcus, Ruthanne, Gillespie, Jennifer, Bogard, April K., Smith, Perry, Shiferaw, Beletshachew, Jones, Timothy F., Henao, Olga L.	Trends in Risky Food Consumption in the General and Immunosuppressed Populations, FoodNet 1996-2002		

Number of Isolates for PFGE in 2004

STATES	STEC O157	Listeria	Total PFGE in 2004
CA	25	15	40
CO	21	9	30
CT	31	18	49
GA	23	15	38
MD	22	18	40
MN	110	5	115
NM	7	2	9
NY	54	17	71
OR	61	5	66
TN	48	16	64
Total	402	120	522

Number of Isolates for PFGE in 2005

STATES	STEC O157	Listeria	Salmonella (NARMS 1:20)	Total PFGE in 2005
CA	25	15	24	64
CO	21	9	16	46
CT	31	18	23	72
GA	23	15	96	134
MD	22	18	40	80
MN	110	5	32	147
NM	7	2	14	23
NY	54	17	23	94
OR	61	5	18	84
TN	48	16	39	103
Total	402	120	325	847

Number of Isolates for PFGE in 2006

STATES	STEC O157	Listeria	Salmonella (NARMS 1:20)	Salmonella (Additional due to Clinical Outcomes study)	Salmonella (due to Selected Serotypes study)	Total Number of Isolates for PFGE in 2006
CA	25	15	24	24	34	122
CO	21	9	16	65	7	118
CT	31	18	23	69	29	170
GA	23	15	96	0	235	369
MD	22	18	40	39	54	173
MN	110	5	32	97	28	272
NM	7	2	14	42	20	85
NY	54	17	23	67	21	182
OR	61	5	18	0	21	105
TN	48	16	39	39	58	200
Total	402	120	325	442	507	1796

FoodNet Special Studies
Participation by site

	Completed Studies						Proposed Studies		
	S. Enteritidis	*S*. Newport	*Listeria*	Infant *Salmonella* / *Campylobacter*	Long Term Care Facility Survey	*Campylobacter* Lab Survey	Clinical Outcomes MDR *Salmonella* cohort	O157 *E. coli* cohort	Selected *Salmonella* serotypes
	2002-2003	2002-2003	2000-2003	2003-2004	2005	2005	2006	2006-2009	2006
CA		X	X	X	X	X	X	X	X
CO	X	X	X	X	X	X	X	X	X
CT	X	X	X	X	X	X	X	X	X
GA		X	X	X	X	X	X	X	X
MD			X			X	X	X	X
MN	X	X	X	X		X	X	X	X
NM	NA	NA	NA	NA	X		X	X	X
NY	X	X	X	X	X	X	X	X	X
OR		X	X	X	X	X	X	X	X
TN	X	X	X	X	X	X	X	X	X

FoodNet Special Studies
Number of interviews per year, by site, 2002-2006

Year = 2002

	S. Enteritidis		*S*. Newport		*Listeria*		Infant *Salmonella/Campylobacter*					
	cases	controls	cases	controls	cases	controls	Salm cases	Campy cases	controls	total cases	total controls	total interviews
CA	did not participate		13	Contractor	7	17	11	4	42	35	59	94
CO	26	Contractor	14	Contractor	2	0	24	0	17	40	17	57
CT	43	Contractor	20	Contractor	6	15	23	12	44	61	59	120
GA	did not participate		42	Contractor	4	10	25	0	68	71	78	149
MD	did not participate		did not participate		2	1	did not participate			2	1	3
MN	50	Contractor	27	Contractor	3	3	20	13	72	36	75	111
NM	not applicable		not applicable		not applicable		not applicable			not applicable		NA
NY	19	Contractor	9	Contractor	5	10	15	7	24	36	34	70
OR	did not participate		6	Contractor	6	18	10	7	33	29	51	80
TN	21	Contractor	46	Contractor	1	3	50	6	62	103	65	168
	159	0	177	0	36	77	178	49	362	440	439	879

Year = 2003

	S. Enteritidis		*S*. Newport		*Listeria*		Infant *Salmonella/Campylobacter*					
	cases	controls	cases	controls	cases	controls	Salm cases	Campy cases	controls	total cases	total controls	total interviews
CA	did not participate		5	Contractor	3	4	26	12	65	46	69	115
CO	13	Contractor	2	Contractor	1	0	19	5	23	27	23	50
CT	13	Contractor	5	Contractor	1	0	24	7	41	37	41	78
GA	did not participate		4	Contractor	0	0	44	4	120	52	120	172
MD	did not participate		did not participate		0	0	did not participate			0	0	0
MN	11	Contractor	4	Contractor	2	10	28	12	79	42	89	131
NM	not applicable		not applicable		not applicable		not applicable			not applicable		NA
NY	16	Contractor	9	Contractor	1	4	13	4	15	27	19	46
OR	did not participate		6	Contractor	0	0	15	8	42	29	42	71
TN	6	Contractor	1	Contractor	0	0	36	6	79	43	79	122
	59	0	36	0	8	18	205	58	464	307	482	789

Year = 2004

	Infant *Salmonella/Campylobacter*					
	Salm cases	Campy cases	controls	total cases	total controls	total interviews
CA	8	7	21	15	21	36
CO	4	4	5	8	5	13
CT	2	0	5	2	5	7
GA	21	1	19	22	19	41
MD		did not participate		did not participate		0
MN	1	1	16	2	16	18
NM		not applicable		not applicable		0
NY	4	2	6	6	6	12
OR	5	1	14	6	14	20
TN	13	0	16	13	16	29
	58	16	102	74	102	176

Year = 2005

No case control studies administered
Only Long Term Care Facility and Campylobacter Lab surveys

Year = 2006

	Clinical Outcomes MDR *Salmonella* cohort study		Selected *Salmonella* Serotypes case control		O157 *E. coli* cohort study		
	cases*	controls	cases	controls	cases**	controls	total interviews
CA	48	NA	38	Contractor	25	NA	111
CO	81	NA	9	Contractor	21	NA	111
CT	92	NA	36	Contractor	31	NA	159
GA	96	NA	247	Contractor	23	NA	366
MD	79	NA	60	Contractor	22	NA	161
MN	129	NA	35	Contractor	110	NA	274
NM	56	NA	25	Contractor	7	NA	88
NY	90	NA	26	Contractor	54	NA	170
OR	18	NA	22	Contractor	61	NA	101
TN	78	NA	65	Contractor	48	NA	191
	767	0	563	0	402	0	1732

*based on 2004 numbers and state specific sampling schemes
*based on 2004 numbers

FoodNet Case-Control Study of Selected *Salmonella* Serotypes
IRB Protocol - November 9, 2005

1. Project Overview

Title

FoodNet case-control study of *Salmonella* Javiana, *Salmonella* Infantis, and *Salmonella* I 4,[5],12:i:- infections.

Protocol summary / Purpose of study

To conduct a case-control study to identify behavioral, dietary, and medical risk factors for *Salmonella* Javiana, *Salmonella* Infantis, and *Salmonella* I 4,[5],12:i:- infections. The population in this study resides in the catchment area of the Centers for Disease Control and Prevention's (CDC) Foodborne Diseases Active Surveillance Network (FoodNet), which includes approximately 44 million persons (15 percent of the U.S. population).

Investigators/collaborators/funding

Investigators include FoodNet staff at CDC and up to ten FoodNet sites. Collaborators include epidemiologists and microbiologists at the United States Department of Agriculture and the United States Food and Drug Administration. Funding for this study will be provided as part of the CDC Emerging Infections Program.

2. Introduction

Background/Justification

Each year, an estimated 1.4 million persons are infected with *Salmonella* in the United States. Most of these infections are self-limited, but severe illness can occur. An estimated 400 persons die of *Salmonella* infections annually (1). Although most intestinal *Salmonella* infections do not require treatment, antimicrobials may be lifesaving in persons with immune-suppressing conditions and with invasive illness, such as bacteremia and meningitis. Fluoroquinolones and extended-spectrum cephalosporins (e.g. ceftriaxone) are the most commonly used antimicrobial agents for treatment of *Salmonella* infections in adults and children, respectively.

Most clinical diagnostic laboratories routinely submit human *Salmonella* isolates to their state public health laboratory for serotyping. State public health laboratories report serotype results of approximately 35,000 *Salmonella* isolates a year to CDC through the Public Health Laboratory Information System.

From 1995 to 2004, 3% (11,510/355,111) of *Salmonella* isolates were identified as *S.* Javiana. The proportion of isolates which were *S.* Javiana increased from 2% (758/41,222) in 1995 to 5% (1,772/35,662) in 2004. *S.* Javiana was the fifth most commonly reported serotype in 2004.

From 1995 to 2004, 1.6% (5,555/355,111) of *Salmonella* isolates were identified as *S.* Infantis. The proportion of isolates which were *S.* Infantis increased from 1.3% (521/41,222) in 1995 to 1.6% (588/35,662) in 2004. *S.* Infantis was the thirteenth most commonly reported serotype in 2004.

Salmonella serotype I 4,[5],12:i:- is a monophasic variant of *Salmonella* serotype Typhimurium, whose antigenic formula is *S.* I 4,5,12:i:1,2. Historically, *S.* I 4,[5],12:i:- has been imprecisely reported as "Subspecies I, Group B" or simply "Group B." The precision with which we can measure the emergence of *S.* I 4,[5],12:i:- is limited by variation across clinical laboratories in space and time as to the extent to which they successfully performed and reported antigenic testing to the second phase. From 1995 to 2004, 0.8% (2,803/355,111) of *Salmonella* isolates were identified as I 4,[5],12:i:-. The proportion of isolates which were *S.* I 4,[5],12:i:-

increased from 0.2% (62/41,222) in 1995 to 2.1% (739/35,662) in 2004. *S.* I 4,[5],12:i:- was the ninth most commonly reported serotype in 2004.

Launched in 1996, FoodNet conducts active surveillance for laboratory-confirmed *Salmonella* infections in > 600 clinical diagnostic laboratories in the 10 participating sites that include approximately 15% of the population of the United States. In FoodNet, the proportion of serotyped *Salmonella* isolates that were *S.* Javiana was 1% (72/7,070) from 1996-1998, and 6% (420/6,503) in 2004. For *S.* Infantis, these proportions were 1.9% (132/7,070) from 1996-1998, and 1.5% (94/6,503) in 2004. For *S.* I 4,[5],12:i:-, those proportions were 0.2% (14/7,070) from 1996-1998, and 3% (197/6,503) in 2004. By 2004, Javiana cases had increased 167% (95% confidence interval [CI] 75%–306% increase) compared to baseline surveillance data from 1996-1998 (2) while I 4,[5],12:i:- increased 425% (95% CI 140%-1,290% increase) (3).

In FoodNet sites in 2004, 361 cases of laboratory-confirmed *S.* Javiana infections were ascertained in residents > 1 year of age: 201 in Georgia, 79 in Maryland, 25 in Tennessee, 19 in New Mexico, 12 in Connecticut, 7 in Minnesota, 6 in California, 6 in New York, 5 in Colorado, and 1 in Oregon. In 2004, 82 *S.* Infantis infections were ascertained in residents > 1 year of age: 19 in California, 11 in Georgia, 11 in Minnesota, 10 in Maryland, 8 in Oregon, 6 in New York, 6 in New Mexico, 4 in Connecticut, 4 in Tennessee, and 3 in Colorado. Also in 2004, 179 cases of *S.* I 4,[5],12:i:- infections were ascertained in residents > 1 year of age: 36 in Tennessee, 35 in Georgia, 26 in Connecticut, 20 in Oregon, 17 in Minnesota, 16 in Maryland, 14 in New York, 14 in California, and 1 in Colorado. In 2004, 14% (59/420) of *S.* Javiana, 13% (12/94) of *S.* Infantis, and 9% (18/197) of *S.* I 4,[5],12:i:- were in infants aged <1 year.

Data from the National Antimicrobial Resistance Monitoring System were analyzed to determine the prevalence of antimicrobial resistance in the three study serotypes. Of the 428 *S.* Javiana isolates from 1996-2003, 11 (2.6%) were resistant to one or more of the 16 antibiotics tested, meaning that 97.4% of isolates were

pan-susceptible. Of the 195 *S.* Infantis isolates from 1996-2003, 18 (9.2%) were resistant to one or more of the 16 antibiotics tested; 90.8% of isolates were pan-susceptible. One *S.* Infantis isolate was resistant to ampicillin, chloramphenicol, sulfonamides, streptomycin and tetracycline (R-type ACSSuT), and two isolates had decreased susceptibility to the third-generation cephalosporin ceftriaxone (i.e. AmpC resistance). *S.* Infantis has been shown to cause multi-drug resistant (MDR) infections in humans. A hospital outbreak in Argentina was caused by a strain carrying a novel class 1 integron conferring resistance to several classes of therapeutic antimicrobial agents, including β-lactams, aminoglycosides, and sulfonamides (4). Spain has also seen the recent emergence of extended-spectrum β-lactamase-producing *S.* Infantis in humans (5). In addition, MDR *S.* Infantis has been recovered from pig carcasses in Ireland (6) and poultry in Japan (7).

Of the 114 *S.* I 4,[5],12:i:- isolates from 1996-2003, 20 (17.5%) were resistant to one or more of the 16 antibiotics tested. Three of the *S.* I 4,[5],12:i:- isolates were R-type ACSSuT, and 3 additional isolates were AmpC resistant. Antimicrobial resistance is a useful epidemiological marker for *S.* I 4,[5],12:i:-; multidrug-resistant *S.* I 4,[5],12:i:- isolates have been reported from Spain (8), Thailand (9), and Brazil (10).

There was a multistate outbreak of pan-susceptible *S.* Javiana in 2004 associated with eating Roma tomatoes grown in the southeast. Although other foodborne outbreaks of *S.* Javiana have occurred, the marked seasonal (late summer) and geographical (southeastern United States) clustering of *S.* Javiana isolation from humans suggests the potential of an environmental source of infection, with individuals seasonally coming into contact with infected animals or contaminated water in particular regions. Further evidence for this hypothesis came from an investigation of an increase of *S.* Javiana cases in Mississippi, which demonstrated that amphibian exposure was a significant risk factor for infection. In 2004, Georgia ,Tennessee, and South Carolina conducted enhanced surveillance of *S.* Javiana cases in the late summer and concluded that environmental exposure to water or animals may be important sources of infection.

From 1997 through 2003, *S.* Infantis has been the documented etiology for 9 foodborne disease outbreaks. Six of these outbreaks have known food vehicles: gefilte fish (2), roast beef, ground beef, pork, and rice. In addition to these foodborne outbreaks, *S.* Infantis was the confirmed etiologic agent in outbreaks associated with direct/indirect contact with live poultry from a single hatchery in Michigan (11), a hospital cafeteria (12), and pig-ear dog treats in Canada (13). Human illness in the U.S. has also been associated with pet turtle contact (Los Angeles County special studies report, 2000). Animal and food data suggest that cattle, swine, poultry, and other animals may serve as reservoirs of *S.* Infantis for human infection.

Of six known foodborne outbreaks of *S.* I 4,[5],12:i:- in the United States from 1998-2005 for which a specific food vehicle was implicated, four were related to poultry exposures, specifically chicken, chicken enchiladas, chicken tandoori, and turkey. In addition, the FoodNet Retail Foods study isolated *S.* I 4,[5],12:i:- from 15 retail poultry samples (13 chicken breast, 2 ground turkey) in five states. Pork chop and ground beef were also tested, but these meats did not yield this serotype. The sources of *S.* I 4,[5],12:i:- among sporadic cases are not known but animal and food data suggest that poultry and other animals may serve as reservoirs for this serotype.

This case-control study is the first multi-state investigation of non-outbreak associated *S.* Javiana, *S.* Infantis, or *S.* I 4,[5],12:i:- infections in the United States.

Objectives/questions the study will address for sporadic *Salmonella* Javiana, *Salmonella* Infantis, and *Salmonella* I 4,[5],12:i:- infections

(1) To identify behavioral, dietary, and medical risk factors

(2) To calculate the proportion of disease risk attributable to specific risk factors

(3) To provide results that can be extrapolated to the U.S. population

3. Procedures/Methods

Design

This study is a prospective, population-based, multi-center, case-control study of sporadic illness. The cases will be identified through FoodNet over a 12-month period.

Study Population

FoodNet is an active surveillance network for foodborne diseases consisting of all or part of ten states in the United States: California, Colorado, Connecticut, Georgia, Maryland, Minnesota, New Mexico, New York, Oregon, and Tennessee. The total population of the ten FoodNet sites is approximately 44 million persons (15 percent of the U.S. population)

Case definition

During the 12-month study period, a case will be considered as any individual > 1 year of age residing in the catchment area of a participating site, who experiences an illness where *Salmonella* Javiana, *Salmonella* Infantis, or *Salmonella* I 4,[5],12:i:- is isolated from stool or a normally-sterile site (including blood, urine or CSF).

Inclusion/Exclusion Criteria: Cases

Inclusion criteria: All patients > 1 year of age residing within the catchment area of a participating site with *Salmonella* Javiana, Infantis, or I 4,[5],12;i:- infection identified by a clinical laboratory during the 12-month study period will be eligible for the study. As in FoodNet surveillance,"residence" will be defined as the primary home address indicated on the FoodNet case report form.

Exclusion criteria: Patients will not be included in the case-control study if:

(1) They are < 1 year of age;

(2) They are not reachable after at least 15 telephone attempts (3 attempts each for 5 days, at least 1 attempt each day occurring between 5pm-9pm, and at least 1 day being a weekend (Saturday 9am-2pm, Sunday 1pm-9pm), or within 45 days of specimen collection date;

(3) They do not have a telephone number available;

(4) They do not speak English or Spanish (or Cantonese or Mandarin in the California site);

(5) They do not report diarrhea;

(6) They are part of an outbreak that has been investigated by public health officials, was subsequently reported to CDC, and in which the vehicle of transmission was clearly identified. All foodborne outbreaks should be reported via EFORS.

Records will be kept documenting why patients were excluded from study.

Inclusion/Exclusion Criteria: Controls

Inclusion Criteria: All persons > 1 year of age residing in a participating FoodNet site within the 12-month study period will be eligible for the study.

Exclusion criteria: Persons will not be included in the case-control study if:

(1) They are < 1 year of age;

(2) They are not reachable after 15 telephone attempts (3 attempts each for 5 days, at least 1 attempt each day occurring between 5pm-9pm, and at least 1 day being a weekend (Saturday 9am-2pm, Sunday 1pm-9pm);

(3) They do not have a telephone number available at their home residence;

(4) They do not speak English or Spanish (or Cantonese or Mandarin in the California site);

(5) Their primary home address is outside the catchment area of all FoodNet sites.

Number of participants expected / Sample size

We will enroll 1,200 controls through an independent contractor: 100 controls per month for 12 months, allocated across the ten FoodNet sites in proportion to the 2003 population distribution (Table 1).

Table 1: Allocation of Controls

Site	2003 Population	Monthly Allocation	Annual Allocation
CA	3,213,848	7	88
CO	2,526,245	6	69
CT	3,483,375	8	95
GA	8,684,715	20	236
MD	5,508,909	13	150
MN	5,059,375	12	144
NY	3,972,809	9	108
OR	3,559,596	8	97
TN	5,841,748	13	159
NM	1,874,614	4	51
Total	43,725,234	100	1200

Based on (1) the incidence of laboratory-confirmed *S.* Javiana, *S.* Infantis, and *S.* I 4,[5],12:i:- infections in persons > 1 year of age in the FoodNet catchment area in 2004, (2) the participation of ten sites, and (3) 85% successful enrollment rate, we expect enrollment of approximately (0.85)(316)=269 cases of *S.* Javiana, (0.85)(82)=70 cases of *S.* Infantis, and (0.85)(165)=140 cases of *S.* I 4,[5],12:i:- during the 12-month study period. Using these same assumptions, we expect 44% of the enrollment to be from cases residing in Georgia.

We expect 1,200 well controls and 269 *S.* Javiana cases to be enrolled, a 4.5:1 ratio. For the Javiana investigation, if we assume a 62.5% prevalence of exposure among controls to raw tomatoes (i.e. the prevalence in the last population survey), and using an alpha level of 5%, the study will have 100% power to detect an odds ratio of at least 3. We expect 70 *S.* Infantis cases to be enrolled, yielding a control to case ratio of 17.1:1. If we assume an 84% prevalence of exposure among cases to chicken and using an alpha level of 5%, the study will have power of 60.8% to detect an odds ratio of at least 3. We expect 140 *S.* I 4,[5],12:i:- cases to be enrolled, yielding a control to case ratio of 9.4:1. For the *S.* I 4,[5],12:i:- investigation, if we assume an 84% prevalence of exposure among controls to chicken, and using an alpha level of 5%, the study will have power of 88.3% to detect an odds ratio of at least 3. (These calculations were performed using EpiInfo version 6.)

Enrollment: Cases

A FoodNet staff member in each site will interview cases. Cases will be identified through active laboratory-based surveillance. FoodNet routinely (usually weekly, but at least monthly) contacts clinical laboratories within its surveillance area to ascertain laboratory-confirmed cases of *Salmonella*. Clinical laboratories will send *Salmonella* isolates to the state public health laboratory for serotyping. A FoodNet staff member will be notified when the public health laboratory identifies *Salmonella* Javiana, Infantis, or I 4,[5],12:i:-. Each site will attempt to enroll every eligible patient. If the patient meets the pre-established criteria for the study,

FoodNet staff will contact the patient (if patient ≥ 18 years of age) or patient's caretaker (if patient < 18 years of age). The patient or caretaker will be read the consent form and asked to participate. Verbal consent will be obtained and documented on the consent form. We will offer to mail the participant a copy of the consent form. For children 13-17 years of age, verbal assent to be interviewed will be obtained after verbal consent from the parents is obtained. The exposure period of interest for cases will be the 7 days prior to diarrheal onset.

Cases may be enrolled up to 45 days after specimen collection date, but every effort will be made to enroll cases as soon as possible. On average, sites identify a case of *Salmonella* within 15 days of specimen collection date, and isolates are serotyped within 21 days. Sites will be expected to meet a performance standard whereby the majority of cases are interviewed within 21 days of the specimen collection date.

Enrollment: Controls

Controls for all sites will be selected and interviewed by a single independent contractor. This contractor has been used in previous studies conducted by FoodNet. Controls will be enrolled at a rate of 100 controls per month. Controls will be recruited from the study population in participating sites. Controls will not be matched to cases. The exposure period of interest for controls will be the 7 days prior to interview.

Controls will be selected and interviewed following a standard Behavioral Risk Factor Surveillance System methodology, used in FoodNet population surveys each month. The contractor will conduct interviews from a sample drawn from a sampling frame using a two-stage sampling design. At the first stage, the contractor will select a set of households using the current BRFSS disproportionate stratified sample (DSS) random-digit-dialing (RDD) method. The DSS-RDD method uses a sample frame that includes all telephone numbers serving households in the geographic target area. This DSS-RDD method divides the telephone numbers that ring in the geographic target areas into listed and unlisted telephone numbers. The listed number

stratum is sampled at a rate of approximately 1.5 times the rate for unlisted numbers, which improves the sample efficiency (ratio of sample records to completed interviews) compared with an un-stratified RDD approach. Non-working numbers, business and cell phones will be removed. The samples are purchased from Genesys (Marketing Group Systems). In the second stage, the contractor will use a computer algorithm (Kish Grid) to randomly select one household member > 1 year of age based on the number of males and females in the household. If a child ≤ 12 years of age is selected, the parent or guardian most responsible for the child will be interviewed about the child's exposures. Control interviews may be conducted at any time during the month.

Questionnaire

The questionnaire covers demographic characteristics, clinical history, and specific exposures. Interviews will be conducted in English or Spanish (or Cantonese or Mandarin in the California site), depending on the preference of the person being interviewed. After obtaining appropriate consent and, for children 13-17 years of age, appropriate verbal assent, the FoodNet staff member will administer the questionnaire to all persons who are 13-17 years of age or ≥18 years of age and to a parent or guardian for persons ≤ 12 years of age. Separate questionnaires will be administered to cases and controls. Interviews will take approximately 20 minutes.

Bacteriologic Isolates

During this study, all *S.* Javiana, Infantis, or I 4,[5],12:i:- isolates received at participating state health department laboratories will be retained at the state public health laboratory and undergo PFGE at the state public health laboratory or at CDC. A unique state laboratory isolate identification number will be used to link data from isolates with data from questionnaires and data collected through routine public health surveillance. No other personal identification data will be associated with specimens. In accordance with the protocol for "A

Cohort Study of the Impact of Resistance on Clinical Outcome among Non-Typhi *Salmonella* Serotypes," which will partially overlap with this study, some *S.* Javiana, Infantis, and I 4,[5],12:i:- isolates will be shipped to the National Antimicrobial Resistance Monitoring System for Enteric Bacteria (NARMS) at CDC for susceptibility testing, according to a site-specific sampling scheme. All other isolates will be retained by the states for potential testing by NARMS after study enrollment concludes.

Informed consent

For persons ≥ 18 years of age, verbal consent will be obtained from all participants. For persons <18 years of age, verbal consent will be obtained from parents or guardians of all participants in this study, as well as from the child to whom questions pertain. A copy of the consent form read to the patient, with their response noted and signed by the interviewer, will be kept with each completed questionnaire.

Because this study requires that participants be interviewed in a timely manner, all participants are interviewed over the telephone. The research could not be performed without a waiver of written documentation of informed consent. This research presents no more than minimal risk of harm to patients. Only questionnaire data and existing specimens are involved. No procedure for which written consent is normally required outside of the research context is involved. This waiver of written documentation of informed consent will not adversely affect the rights and welfare of participants.

Confidentiality

All information and identifiers will be kept confidential in locked cabinets in locked offices with limited access and electronic information on password-protected computers in a password-protected database. A statement of confidentiality will be read to each potential participant as part of the process of obtaining informed consent for

participation in the study. Only the databases will be forwarded to CDC. Protected health information (e.g. name, address) will not be forwarded to CDC or included in any published materials relating to this study. The primary unique identifiers attached to each isolate are the state laboratory isolate ID number (already an established practice for identifying laboratory isolates sent to the CDC) and a case control study ID number. These numbers will be used to merge laboratory, questionnaire, and routine public health data. The assignment of a unique state lab ID and case control study ID number permits the removal of all personal identifiers and ensures confidentiality. All written questionnaires containing patient identifiers will be stored in a secure location to which only study investigators at FoodNet sites will have access.

Risks and benefits

Participants will receive no direct benefit from the study. There is no penalty for not participating. There is also no risk to the patient or his or her caretaker, and the only cost is time spent (approximately 20 minutes) being interviewed. They may refuse to answer any of the questions or stop at any time. The participant will be offered free-of-charge a fact sheet about *Salmonella* infections and food safety, as well as a copy of the consent form. Fact sheets are available at each participating site. They will also be informed of the FoodNet website (http://www.cdc.gov/foodnet/).

Data handling/Analysis

Completed case questionnaires will be reviewed and coded by FoodNet staff at each study site, and information entered into a database. Completed control questionnaires will be entered into a database by the contractor for all sites. Analysis will be conducted by an analytic team comprising epidemiologists and statisticians from throughout FoodNet.

This study will abide by the Data Quality act in ensuring and maximizing the quality, objectivity, utility, and integrity of information, including statistical information (14).

Primary analysis will include three comparisons: (1) *S.* Javiana cases and controls, (2) *S.* Infantis cases and controls, and (3) *S.* I 4,[5],12:i:- cases and controls.

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Steering Committee Proposal - **REVISION**
Centers for Disease Control and Prevention
Emerging Infections Program
Foodborne Diseases Active Surveillance Network (FoodNet)
Phone: (404)-371-5465 Fax:(404)-371-5444

Proposed by: Patrick McCarthy (FDA) and others

Title: Contributing Factors Identified in Produce Associated Outbreaks, FoodNet, 1999-2002

Submitted: October 21, 2005

Purpose: To look at contributing factors identified during produce outbreak investigations in the FoodNet sites, using data from the electronic Foodborne Outbreak Reporting System (eFORS). Outbreaks will be examined to determine the proportion with a viral versus bacterial etiology and the identified contributing factors associated with each etiology.

Original Proposal:

Proposed by: Craig Hedberg (MN), Patrick McCarthy (FDA), and others

Title: Improving the reporting of contributing factors (CF) to EFORS

Submitted: September 16, 2004

Purpose: Patterns, trends, and insights based on an analysis of the "contributing factor" data reported on the electronic version of the Investigation of a Foodborne Outbreak form (CDC 52.13) will be distributed to states in an effort to improve reporting of outbreak associated contamination factors, proliferation / amplification factors, survival factors, and method of preparation data.

Results of the CF analysis will be used to help standardize definitions and terms among agencies, develop strategies for improving facility investigations, setting outbreak investigation priorities, improve the efficiency of tracebacks to the source of contamination, and to help focus regulatory efforts.

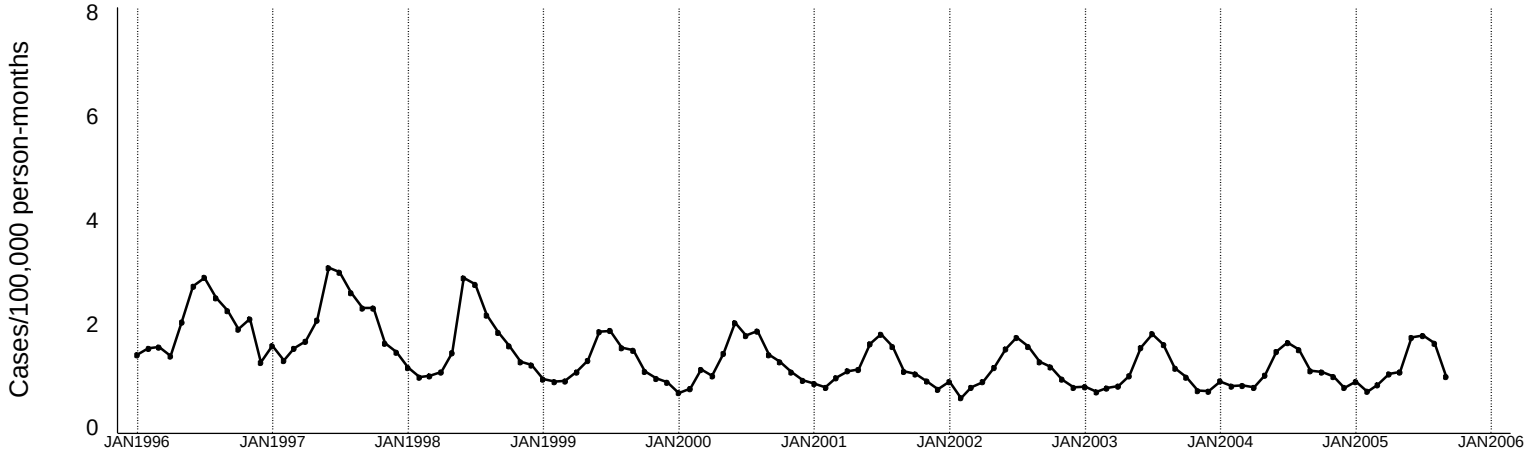
Dataset: All data reported on the electronic version of the Investigation of a Foodborne Outbreak form (CDC 52.13) in EFORS for the years 1998 through 2002 for all reporting units in the United States.

Timeline: A draft of the preliminary analyses to be completed in 120 days after the data are received.

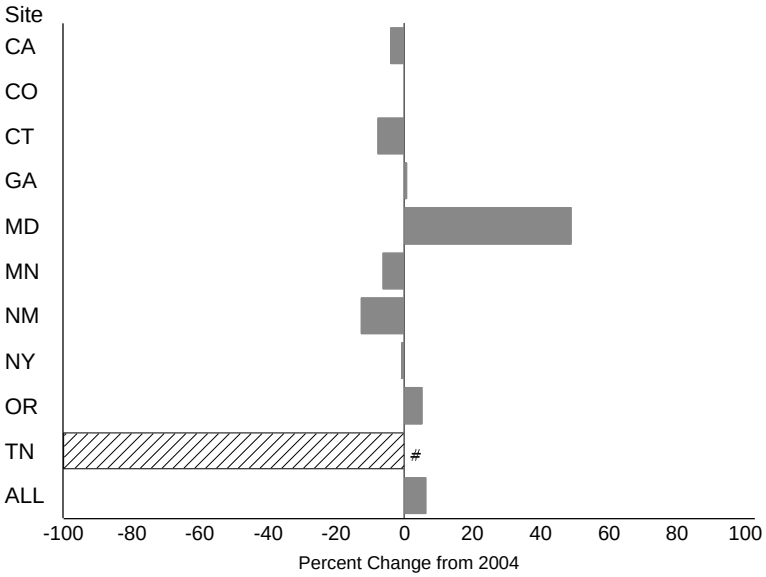
Publication: A summary report based on the proposed analysis will be distributed to those that contribute data to EFORS using the electronic version of the Investigation of a Foodborne Outbreak form (CDC 52.13). The summary report may be referenced in the Report of the FDA Retail Food Program Database of Foodborne Illness Risk Factors and used to support the Food Safety Objectives in the Healthy People 2010 Initiative. If an additional abstract or manuscript is developed then the document will be submitted to the FoodNet Steering Committee to obtain approval for publication. The Data Use Policy for this proposal includes collaboration with and approval for dissemination from the NCID, Outbreak Response and Surveillance Unit.

Campylobacter

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

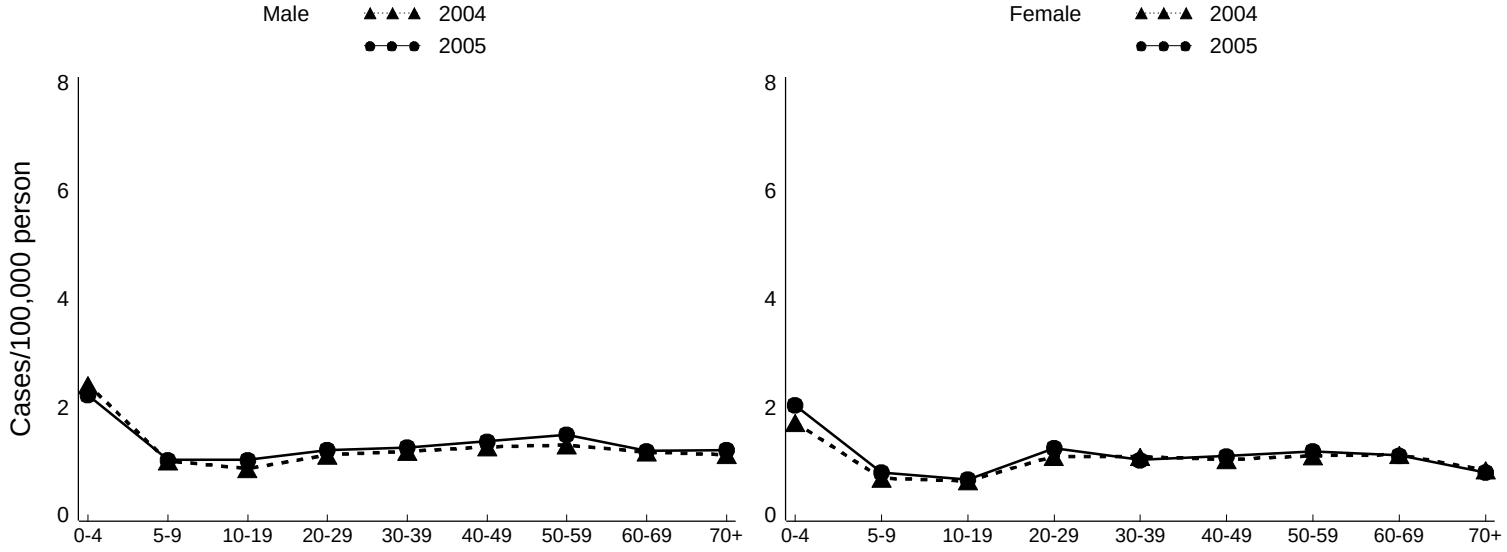


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	688	21.41	717	22.31	772	24.02
CO	399	15.79	399	15.79	317	13.07
CT	425	12.20	461	13.23	437	12.65
GA	450	5.182	447	5.147	491	5.769
MD	317	5.754	213	3.866	253	5.556
MN	667	13.18	711	14.05	758	15.13
NM	233	12.43	267	14.24	267	14.24
NY	387	8.971	390	9.040	317	10.26
OR	520	14.61	494	13.88	468	13.34
TN	0	0.000	332	5.683	233	5.665
ALL	4086	10.69	4431	10.06	4312	10.74

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

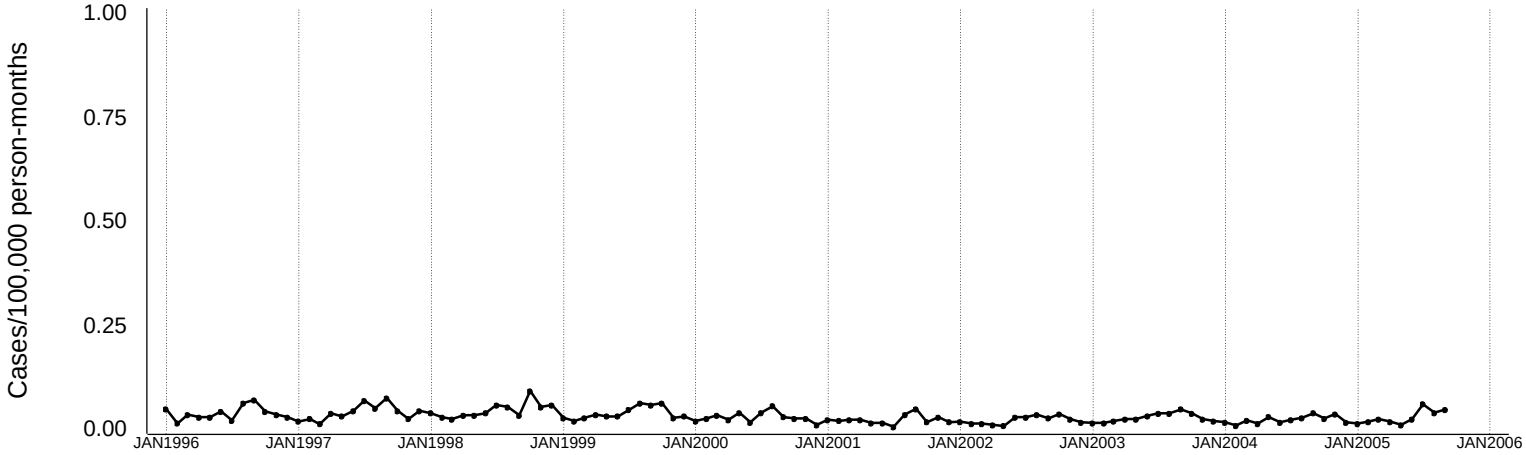
Calendar year through September: Rates for 2004 and 2005 by age group and sex



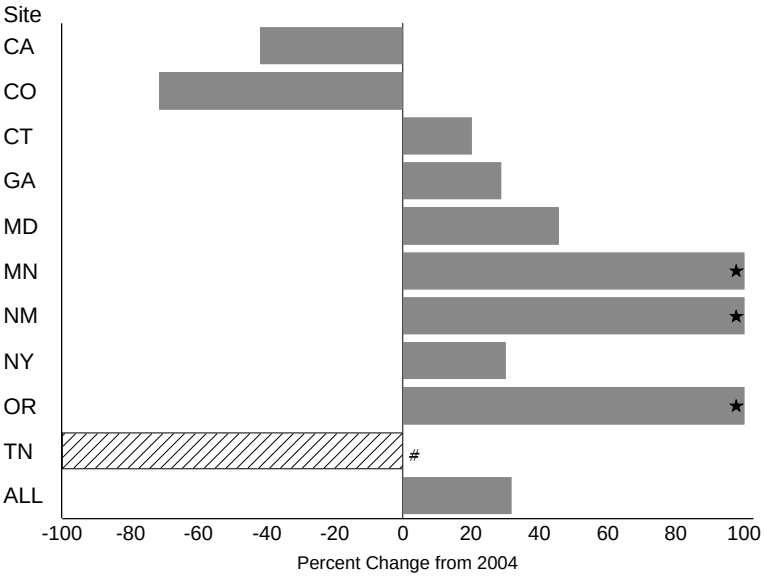
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Listeria

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

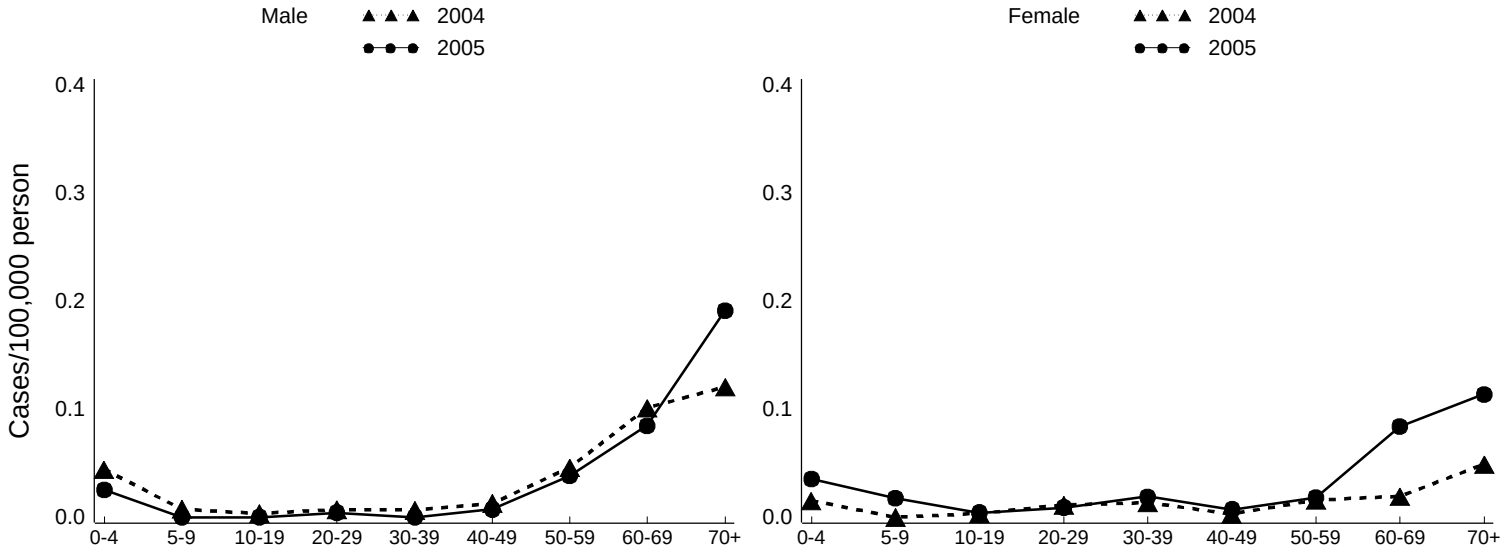


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	7	0.218	12	0.373	11	0.330
CO	2	0.079	7	0.277	5	0.185
CT	18	0.517	15	0.431	13	0.382
GA	18	0.207	14	0.161	17	0.195
MD	16	0.290	11	0.200	13	0.291
MN	9	0.178	2	0.040	3	0.060
NM	4	0.213	1	0.053	1	0.053
NY	13	0.301	10	0.232	11	0.379
OR	10	0.281	3	0.084	6	0.166
TN	0	0.000	10	0.171	6	0.156
ALL	97	0.254	85	0.193	85	0.222

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

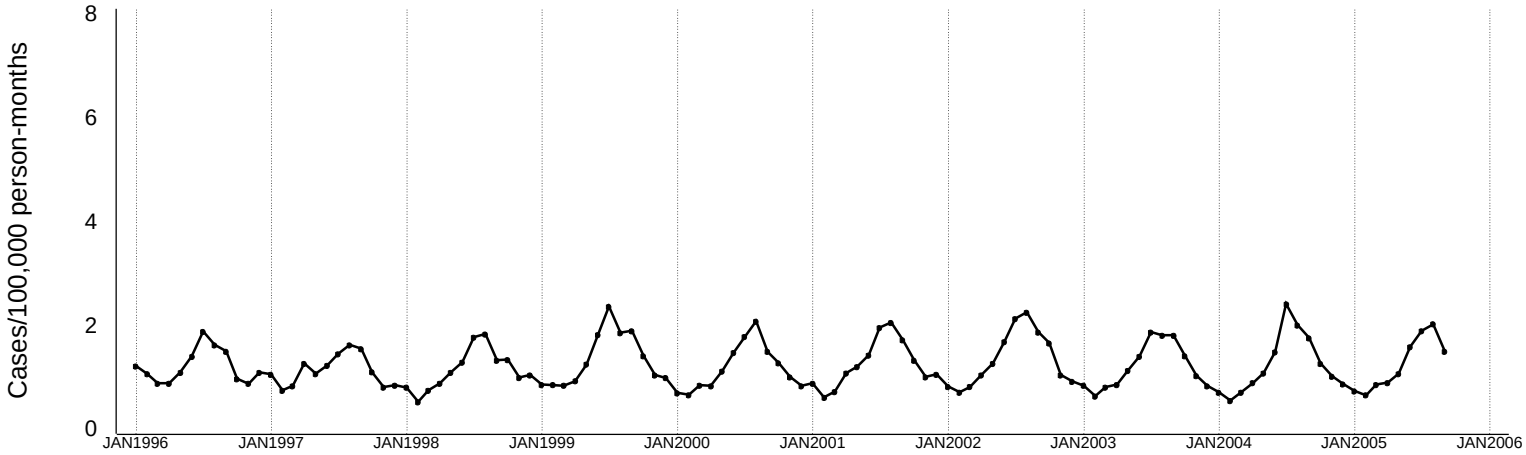
Calendar year through September: Rates for 2004 and 2005 by age group and sex



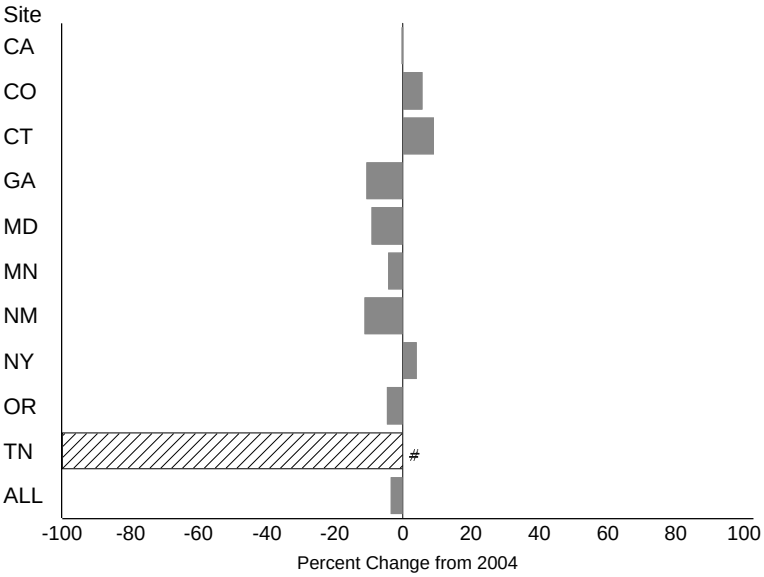
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Salmonella, all serotypes

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

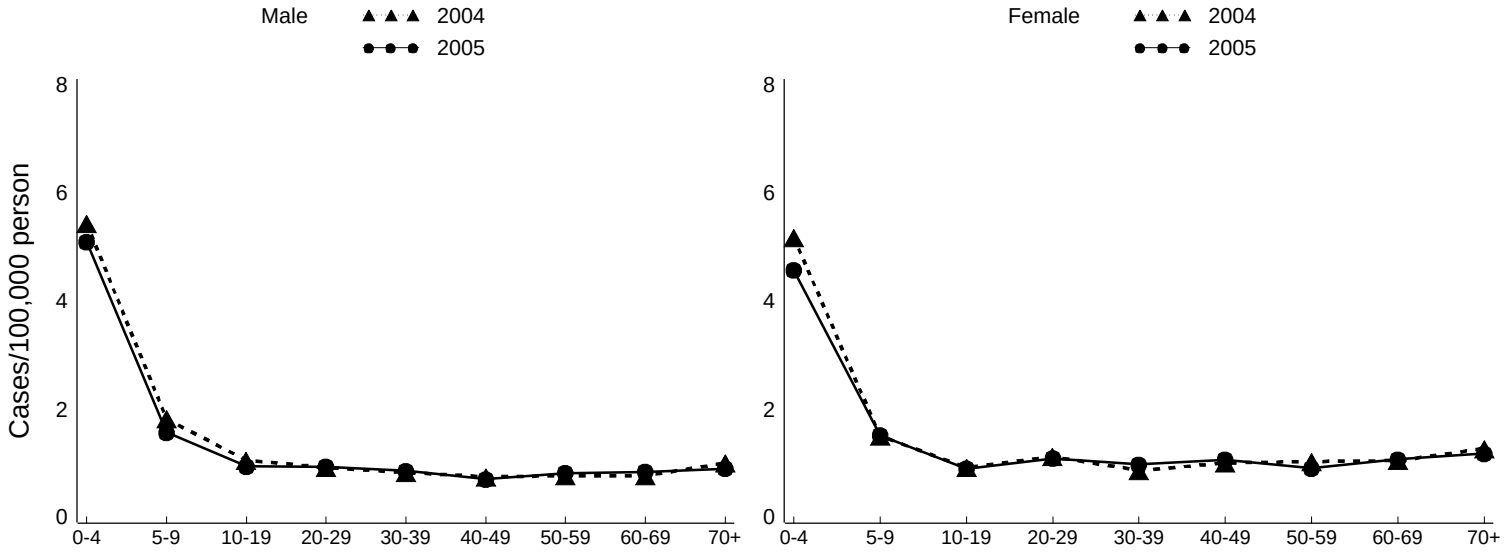


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	363	11.3	364	11.3	374	11.6
CO	270	10.7	256	10.1	234	9.70
CT	403	11.6	370	10.6	349	10.1
GA	1315	15.1	1470	16.9	1341	15.7
MD	603	10.9	663	12.0	565	12.1
MN	460	9.09	480	9.49	489	9.77
NM	193	10.3	217	11.6	217	11.6
NY	380	8.81	366	8.48	316	10.2
OR	293	8.23	307	8.62	267	7.60
TN	0	0.00	616	10.5	462	11.8
ALL	4280	11.2	5109	11.6	4614	11.6

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

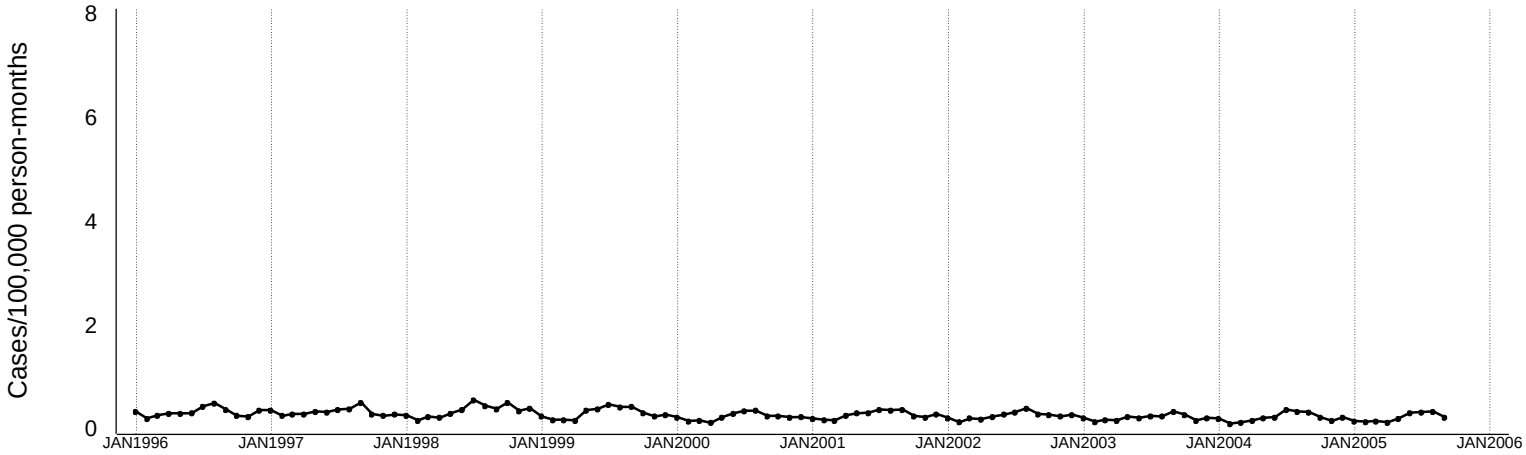
Calendar year through September: Rates for 2004 and 2005 by age group and sex



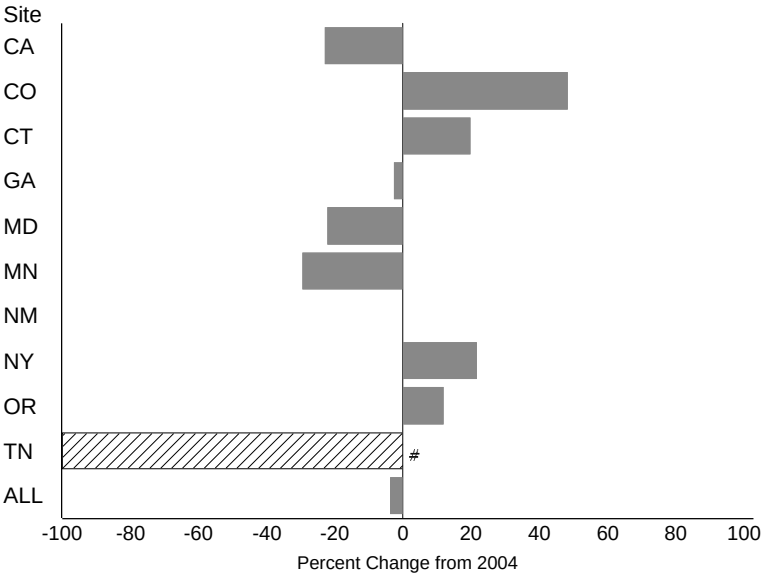
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Salmonella Typhimurium

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

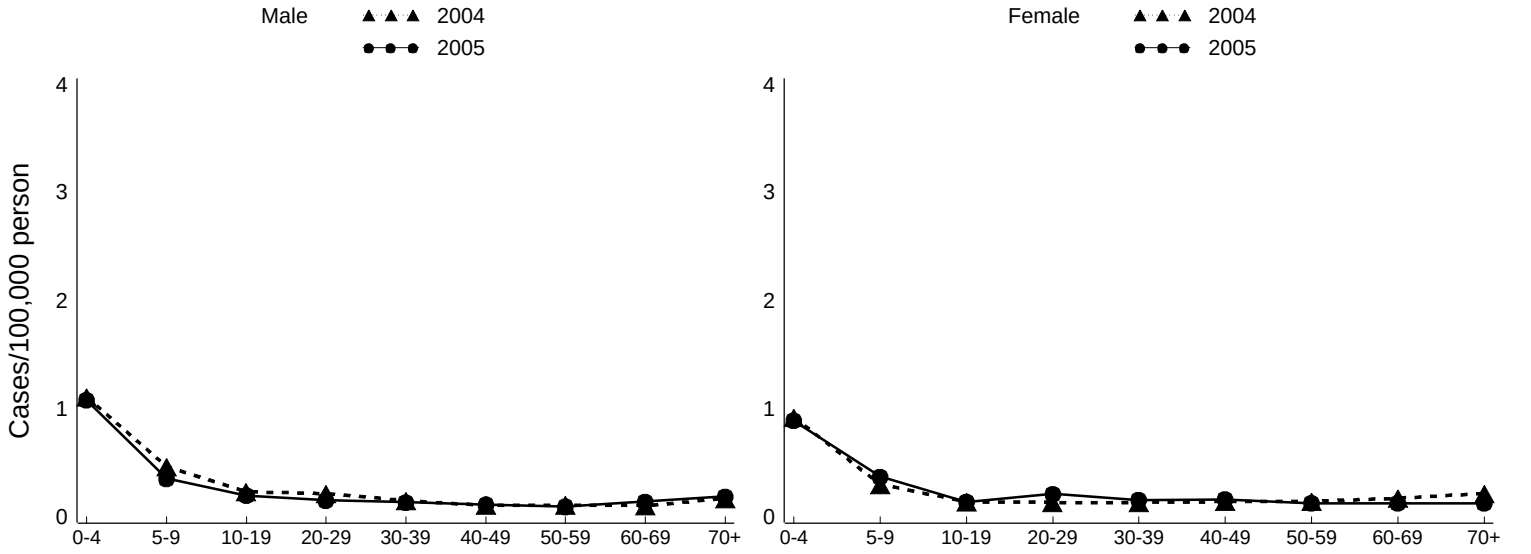


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	54	1.68	70	2.18	60	1.87
CO	83	3.29	56	2.22	57	2.39
CT	85	2.44	71	2.04	71	2.06
GA	190	2.19	195	2.25	207	2.43
MD	81	1.47	104	1.89	100	2.21
MN	87	1.72	123	2.43	124	2.47
NM	40	2.13	40	2.13	40	2.13
NY	79	1.83	65	1.51	63	2.14
OR	67	1.88	60	1.69	59	1.67
TN	0	0.00	133	2.28	100	2.58
ALL	766	2.00	917	2.08	881	2.22

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

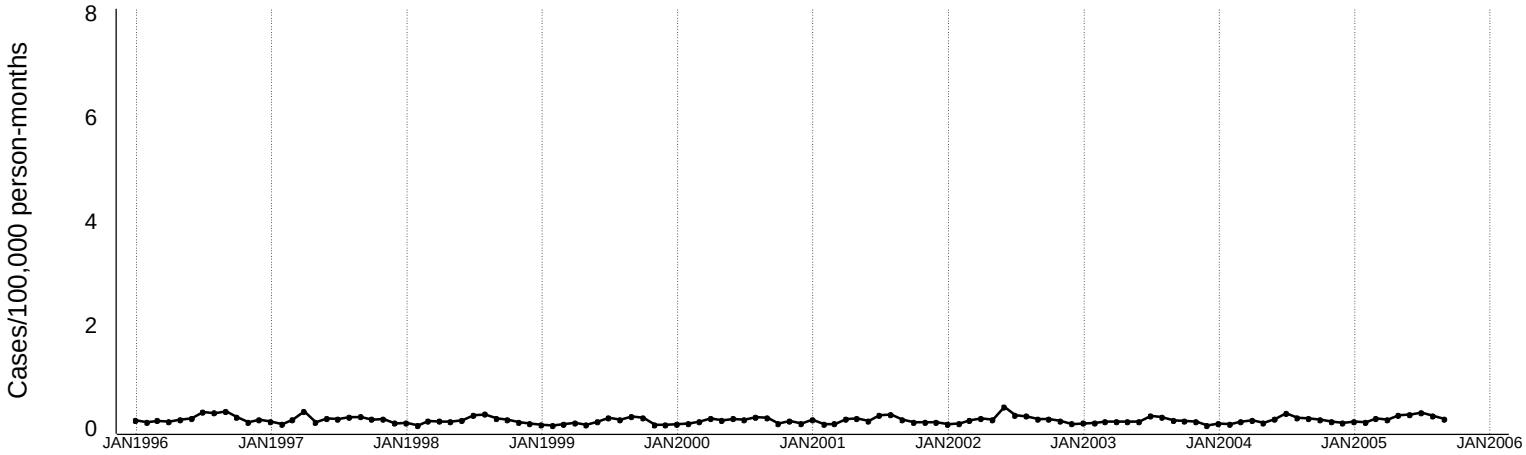
Calendar year through September: Rates for 2004 and 2005 by age group and sex



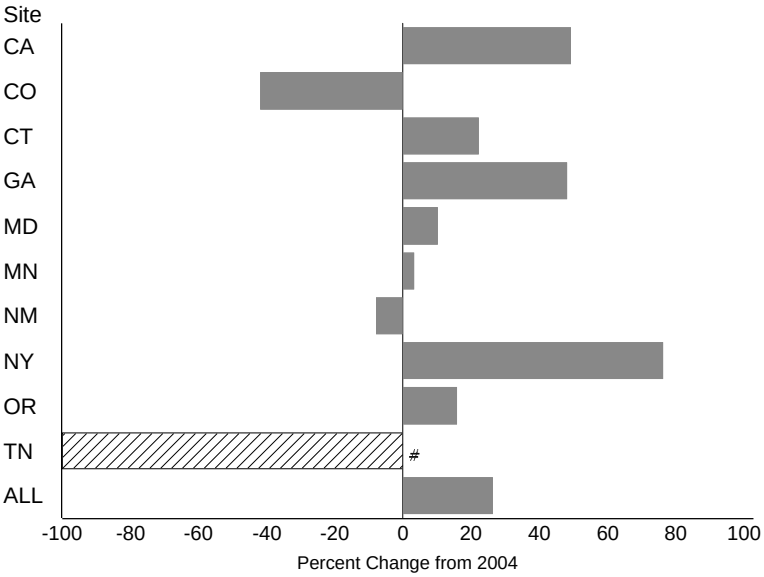
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Salmonella Enteritidis

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

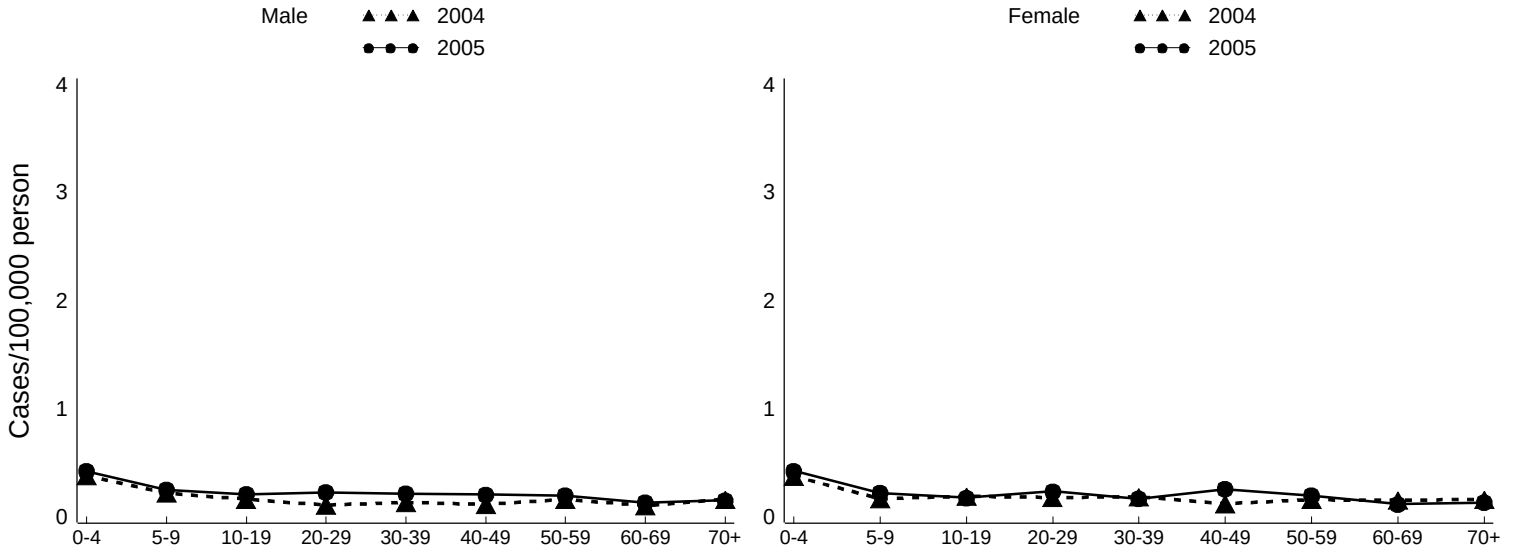


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	82	2.551	55	1.711	53	1.649
CO	32	1.267	55	2.177	42	1.729
CT	105	3.014	86	2.469	80	2.306
GA	108	1.244	73	0.841	71	0.833
MD	174	3.159	158	2.868	147	3.223
MN	97	1.917	94	1.858	87	1.738
NM	12	0.640	13	0.693	13	0.693
NY	81	1.878	46	1.066	61	1.949
OR	59	1.657	51	1.433	40	1.148
TN	0	0.000	54	0.924	34	0.830
ALL	750	1.962	685	1.554	628	1.612

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

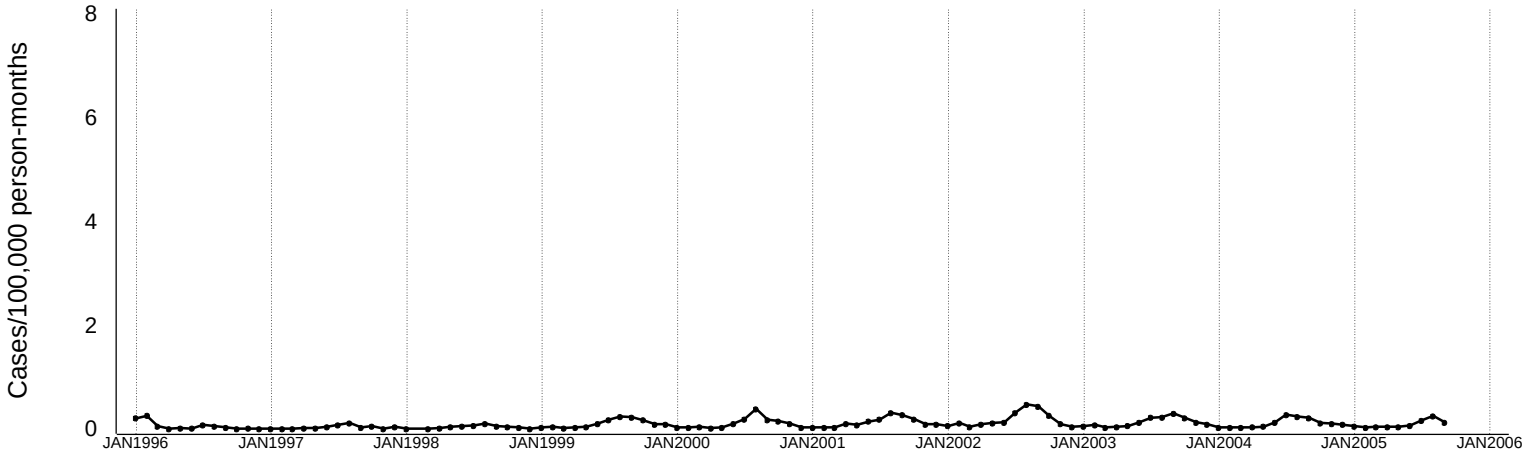
Calendar year through September: Rates for 2004 and 2005 by age group and sex



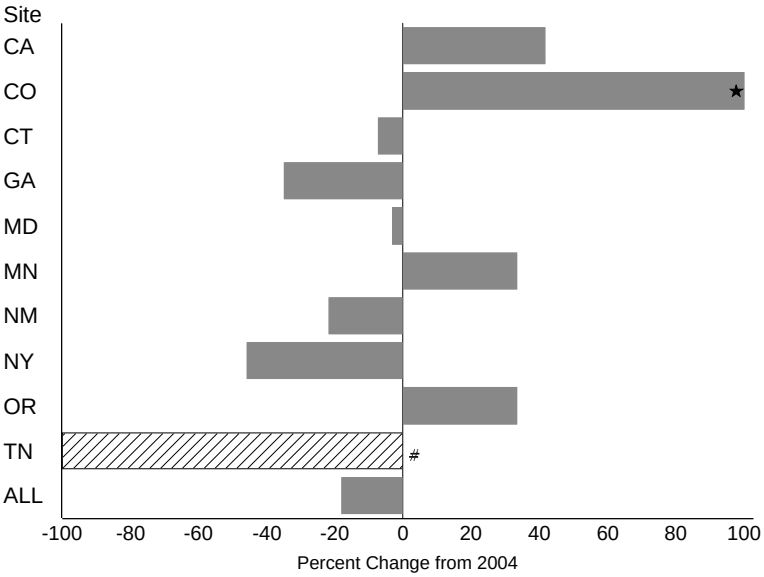
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Salmonella Newport

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

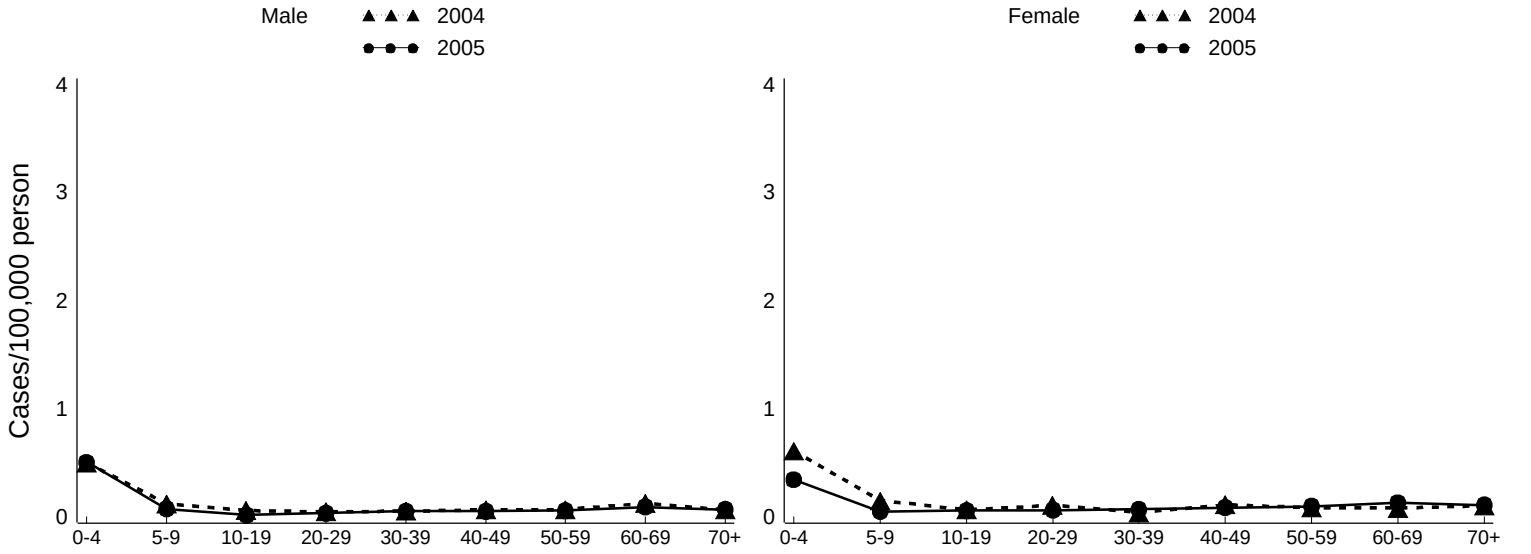


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	17	0.529	12	0.373	22	0.677
CO	31	1.227	10	0.396	18	0.721
CT	13	0.373	14	0.402	28	0.800
GA	148	1.704	227	2.614	215	2.523
MD	31	0.563	32	0.581	39	0.796
MN	36	0.712	27	0.534	33	0.654
NM	18	0.960	23	1.227	23	1.227
NY	19	0.440	35	0.811	37	1.139
OR	12	0.337	9	0.253	19	0.534
TN	0	0.000	67	1.147	61	1.746
ALL	325	0.850	456	1.035	494	1.247

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

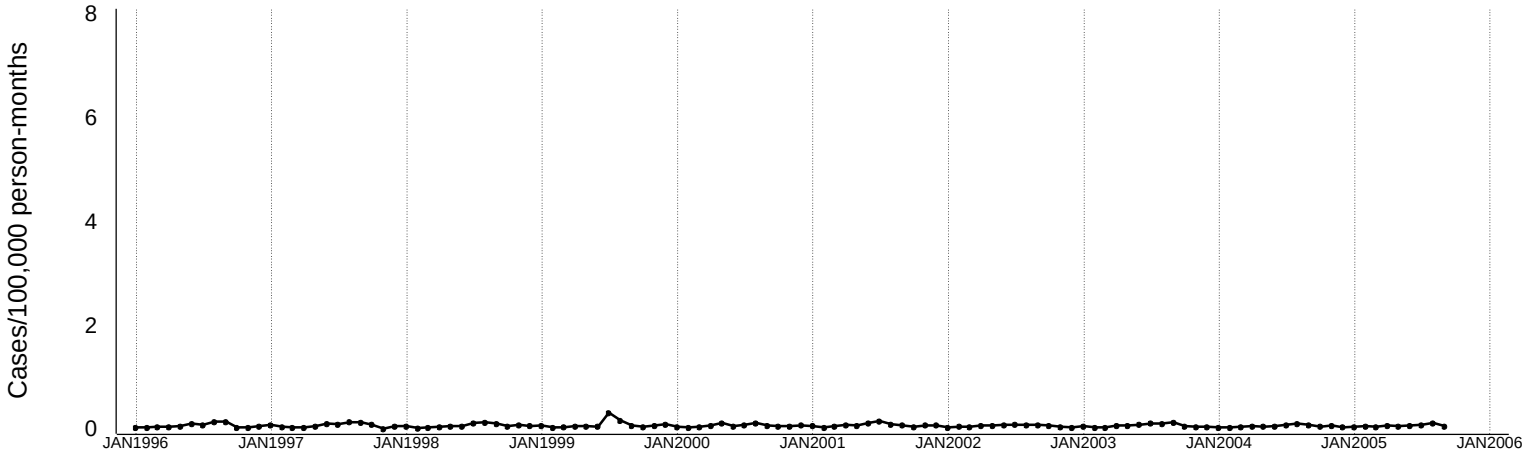
Calendar year through September: Rates for 2004 and 2005 by age group and sex



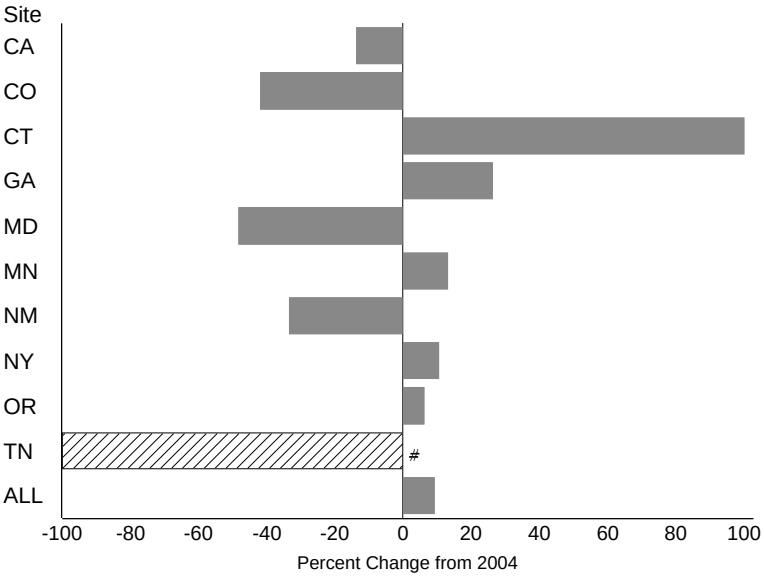
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Salmonella Heidelberg

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

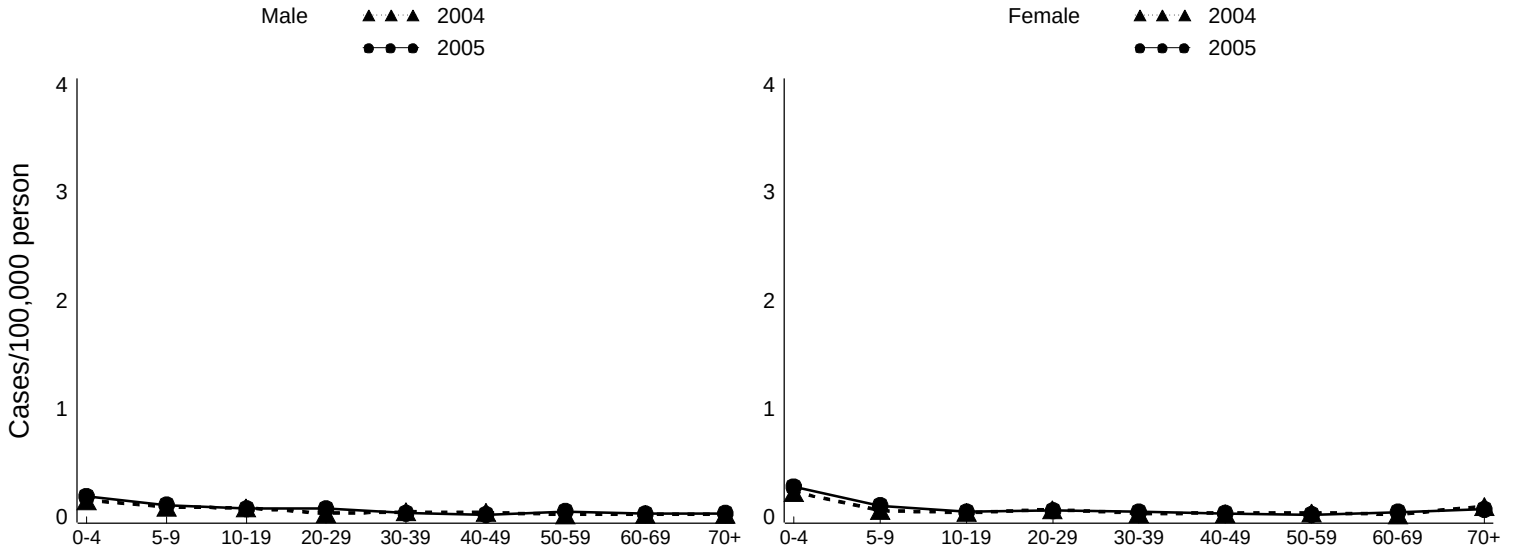


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	32	0.996	37	1.151	35	1.076
CO	7	0.277	12	0.475	15	0.619
CT	24	0.689	12	0.344	15	0.445
GA	53	0.610	42	0.484	54	0.638
MD	14	0.254	27	0.490	25	0.546
MN	26	0.514	23	0.455	37	0.739
NM	4	0.213	6	0.320	6	0.320
NY	32	0.742	29	0.672	27	0.927
OR	35	0.983	33	0.927	19	0.528
TN	0	0.000	19	0.325	19	0.480
ALL	227	0.594	240	0.545	251	0.645

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

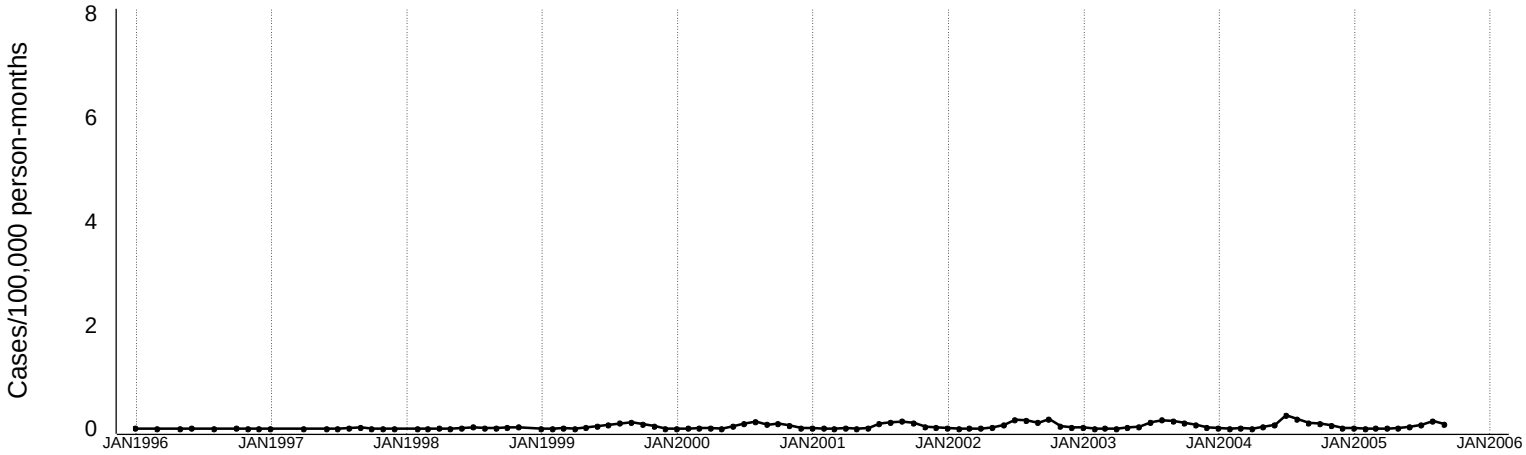
Calendar year through September: Rates for 2004 and 2005 by age group and sex



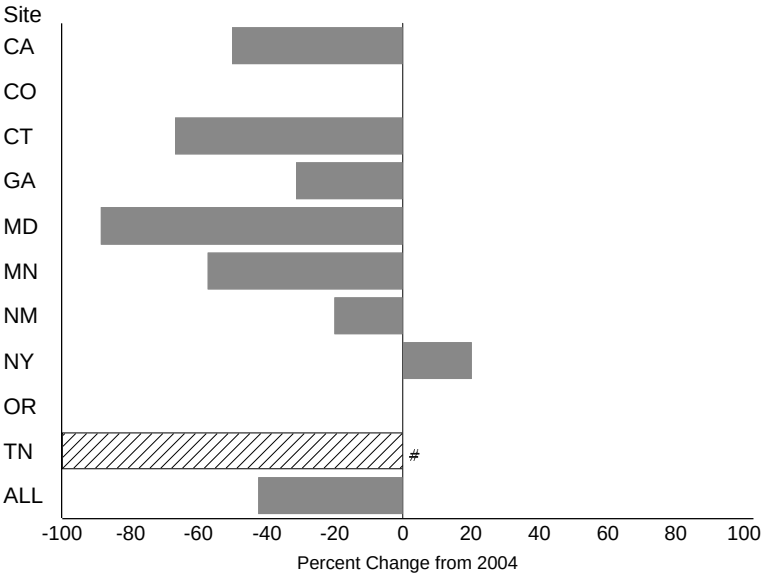
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Salmonella Javiana

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

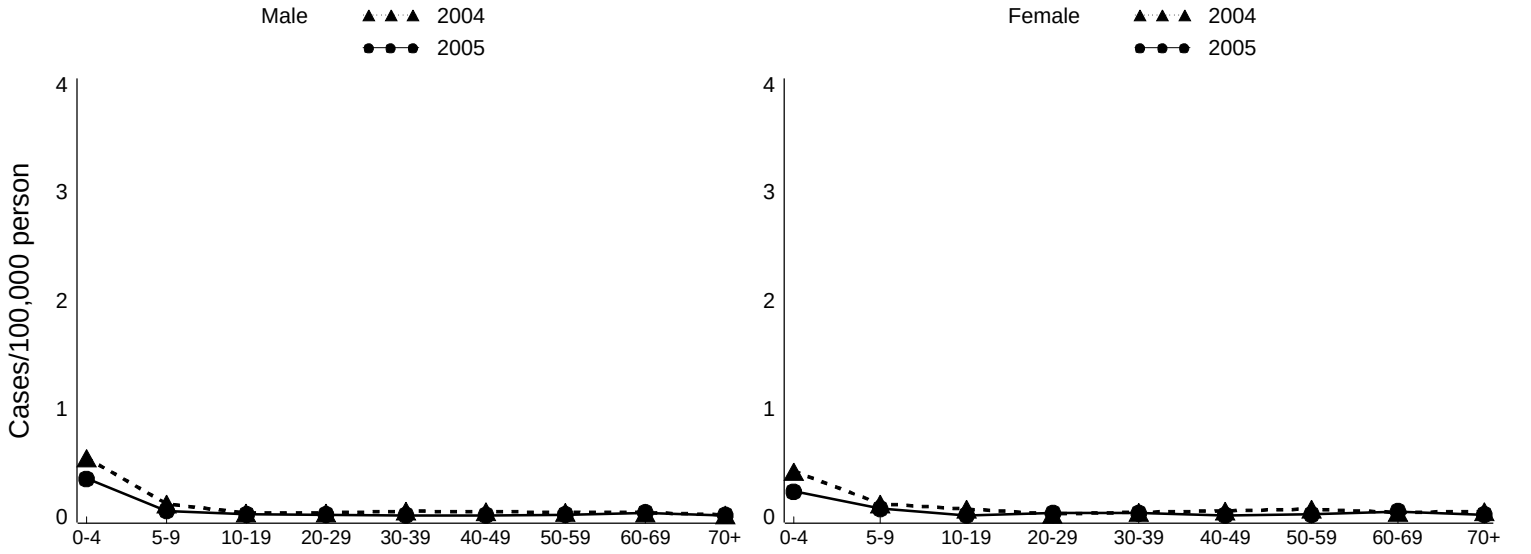


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	1	0.031	2	0.062	3	0.106
CO	2	0.079	2	0.079	3	0.109
CT	4	0.115	12	0.344	5	0.138
GA	130	1.497	189	2.176	153	1.795
MD	9	0.163	78	1.416	26	0.508
MN	3	0.059	7	0.138	6	0.112
NM	12	0.640	15	0.800	15	0.800
NY	6	0.139	5	0.116	4	0.094
OR	1	0.028	1	0.028	3	0.086
TN	0	0.000	25	0.428	21	0.574
ALL	168	0.440	336	0.762	239	0.586

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

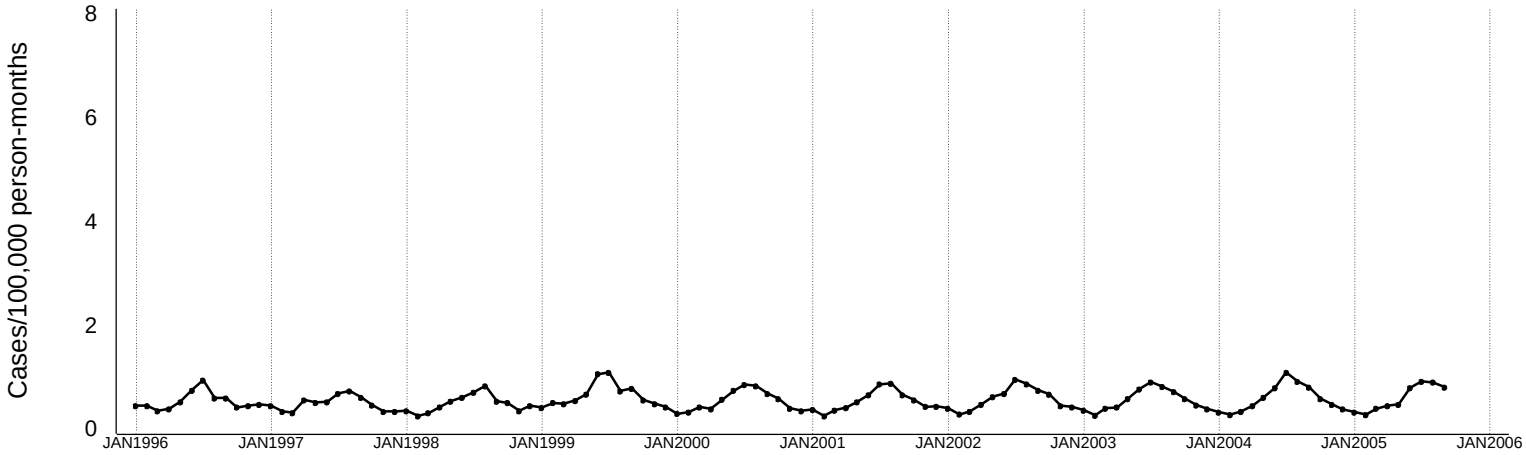
Calendar year through September: Rates for 2004 and 2005 by age group and sex



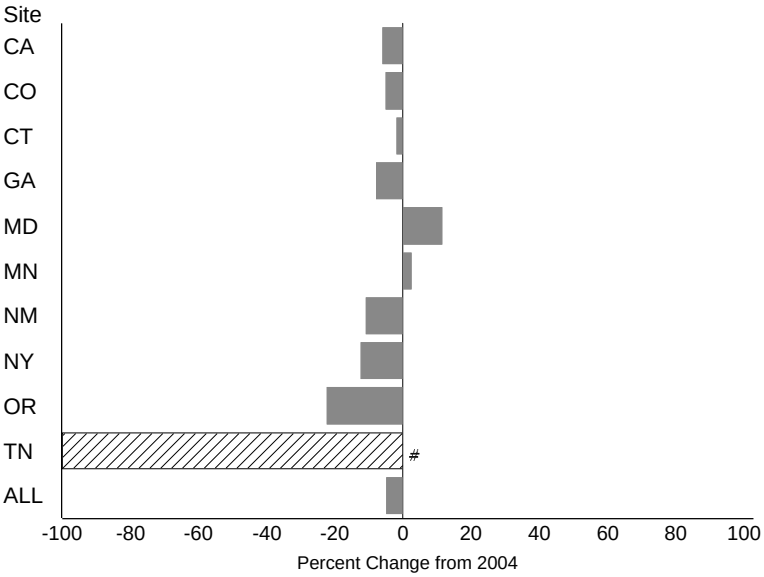
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Salmonella, all others

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

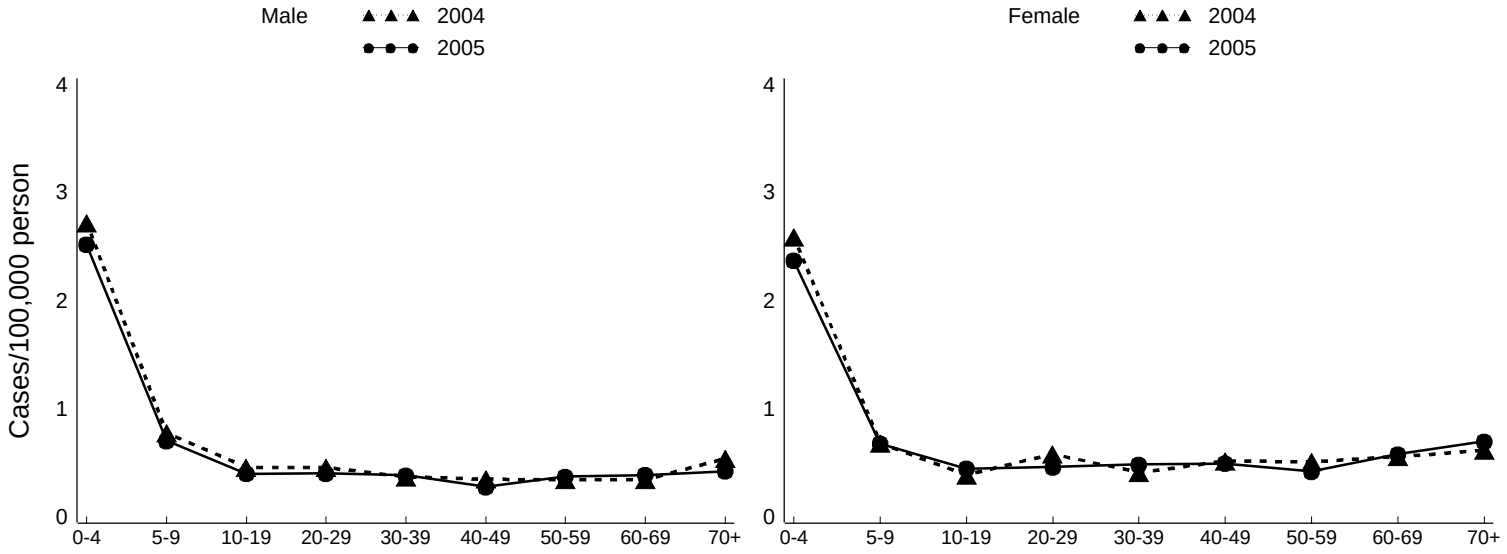


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	177	5.51	188	5.85	201	6.26
CO	115	4.55	121	4.79	100	4.13
CT	172	4.94	175	5.02	150	4.35
GA	686	7.90	744	8.57	640	7.51
MD	294	5.34	264	4.79	228	4.79
MN	211	4.17	206	4.07	203	4.06
NM	107	5.71	120	6.40	120	6.40
NY	163	3.78	186	4.31	124	3.93
OR	119	3.34	153	4.30	127	3.63
TN	0	0.00	318	5.44	227	5.60
ALL	2044	5.35	2475	5.62	2121	5.27

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

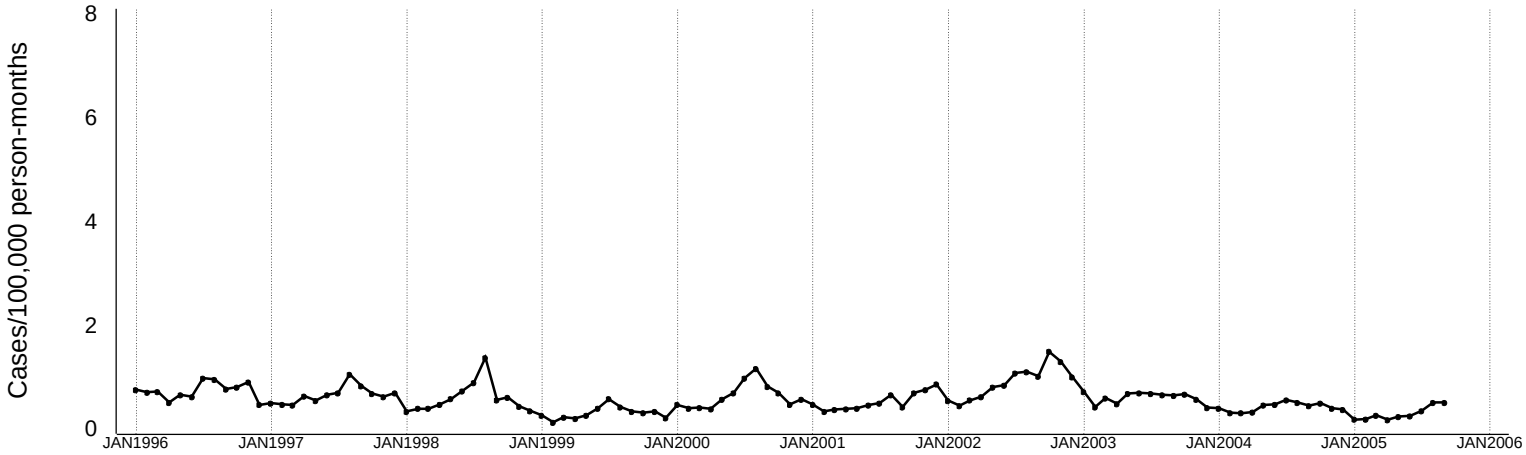
Calendar year through September: Rates for 2004 and 2005 by age group and sex



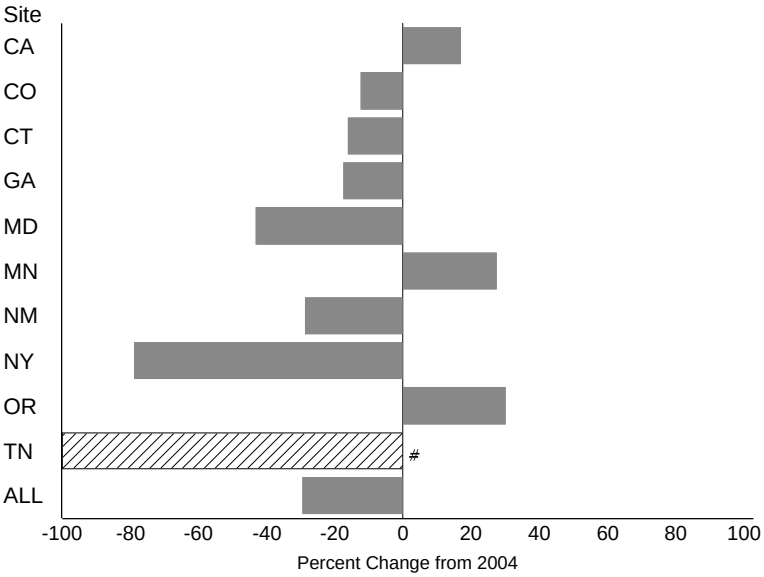
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Shigella, all species

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

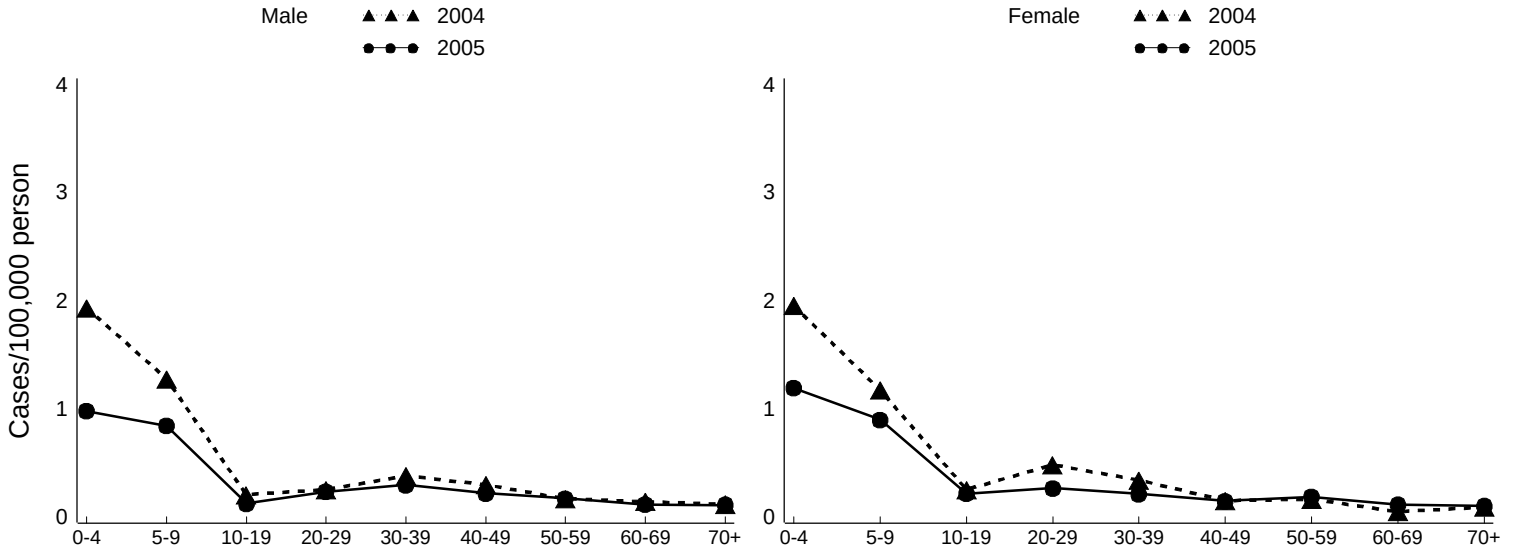


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	208	6.47	178	5.54	296	9.22
CO	64	2.53	73	2.89	111	4.58
CT	47	1.35	56	1.61	55	1.58
GA	394	4.54	477	5.49	592	6.90
MD	65	1.18	114	2.07	309	6.07
MN	70	1.38	55	1.09	272	5.47
NM	75	4.00	105	5.60	105	5.60
NY	43	1.00	202	4.68	76	2.02
OR	65	1.83	50	1.40	75	2.14
TN	0	0.00	371	6.35	199	4.77
ALL	1031	2.70	1681	3.81	2089	5.28

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

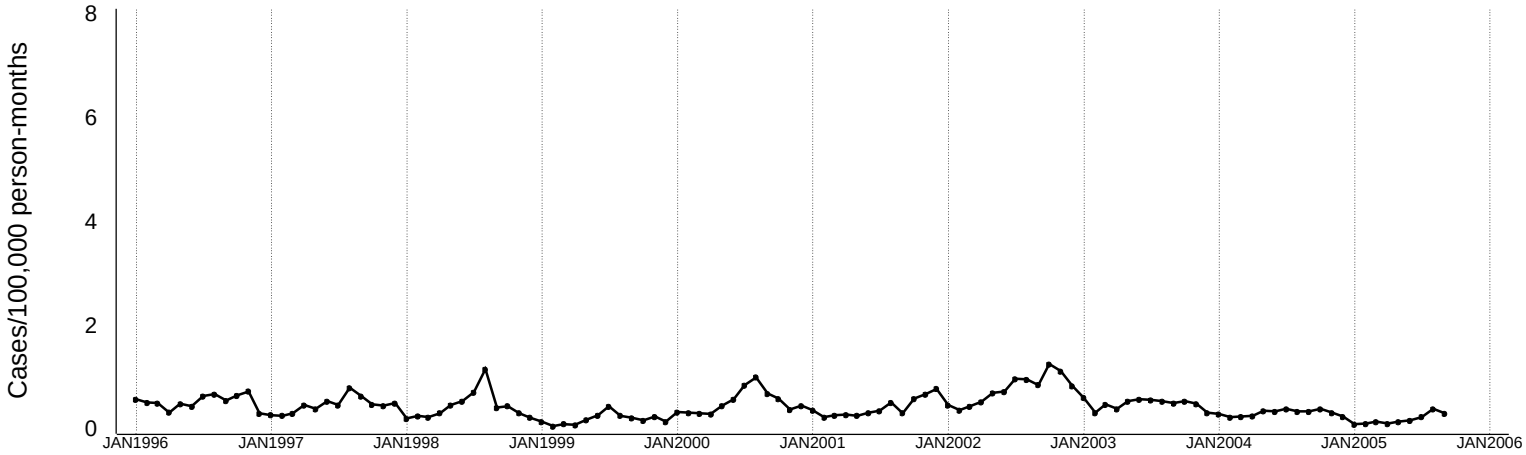
Calendar year through September: Rates for 2004 and 2005 by age group and sex



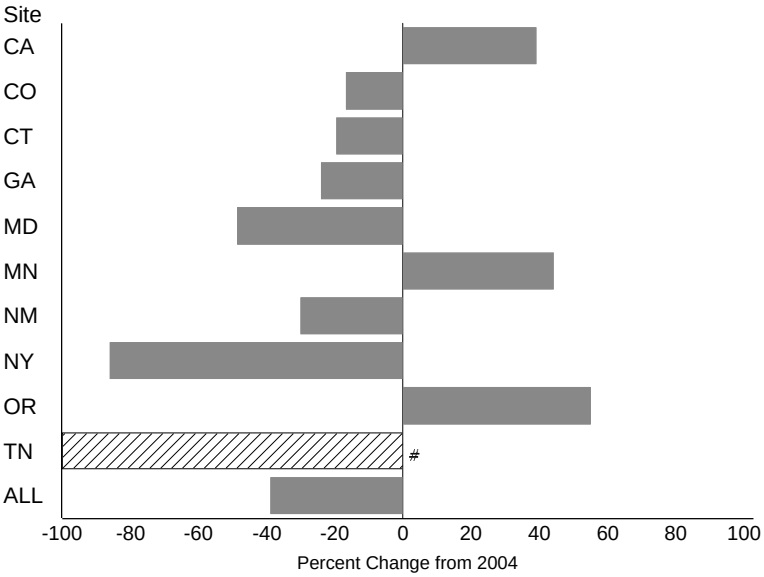
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Shigella sonnei

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

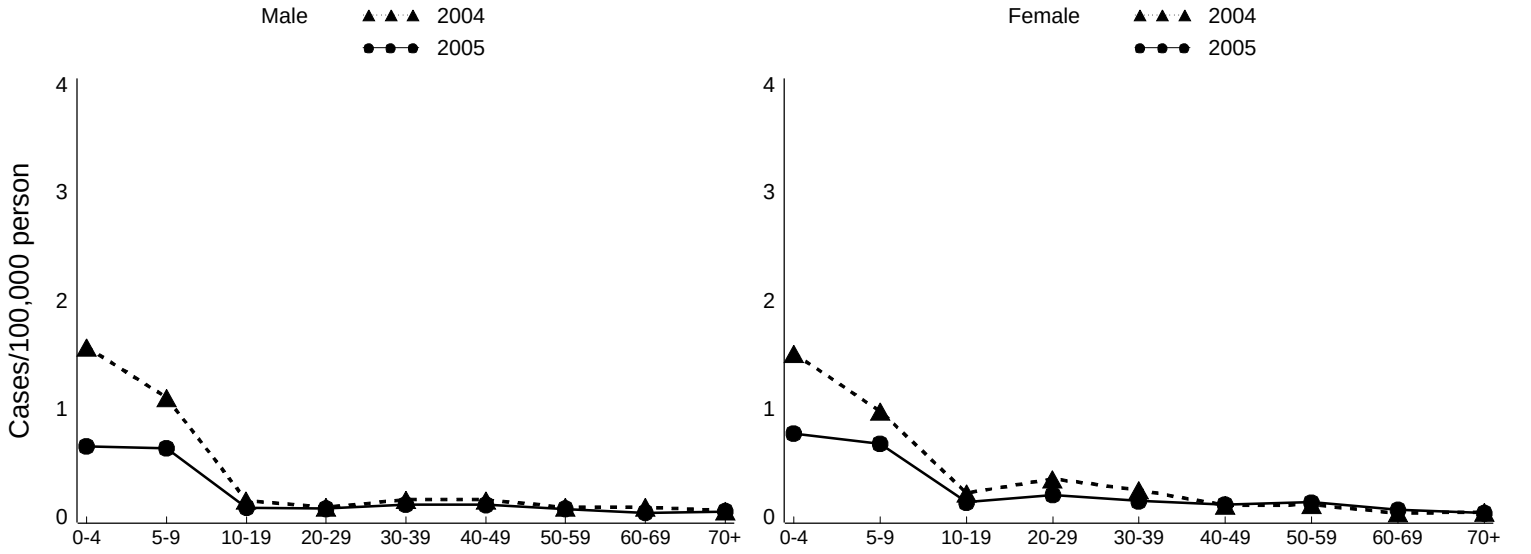


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	114	3.547	82	2.551	188	5.860
CO	35	1.385	42	1.663	78	3.229
CT	29	0.833	36	1.033	38	1.100
GA	268	3.086	352	4.053	477	5.551
MD	34	0.617	66	1.198	271	5.253
MN	49	0.968	34	0.672	245	4.940
NM	42	2.240	60	3.201	60	3.201
NY	27	0.626	191	4.427	68	1.754
OR	48	1.348	31	0.871	43	1.217
TN	0	0.000	321	5.495	166	3.944
ALL	646	1.690	1215	2.757	1634	4.186

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

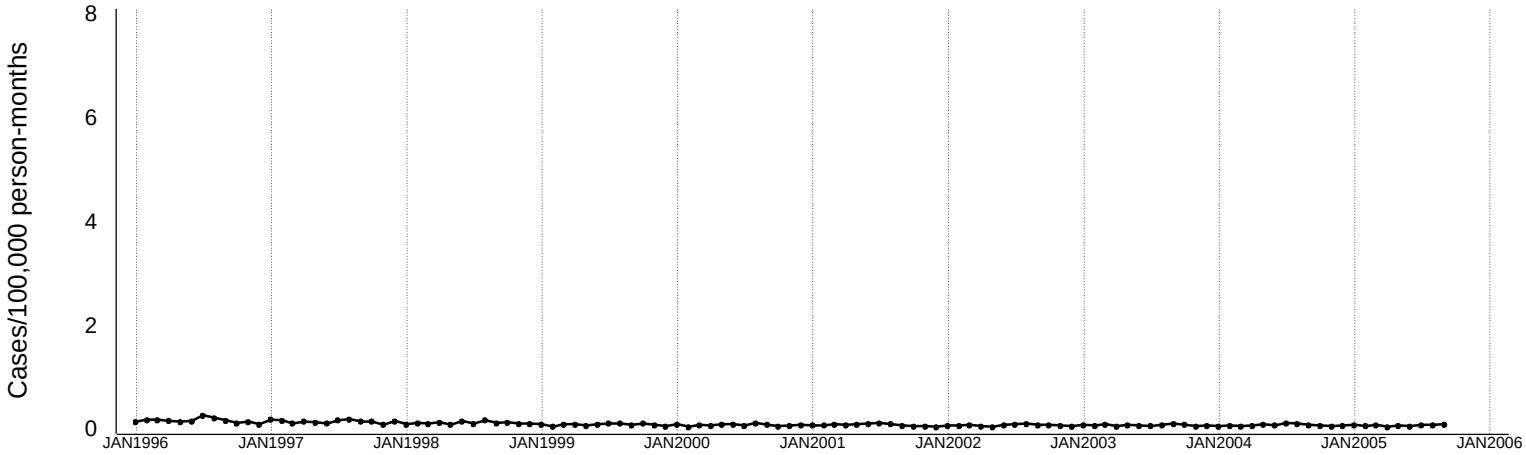
Calendar year through September: Rates for 2004 and 2005 by age group and sex



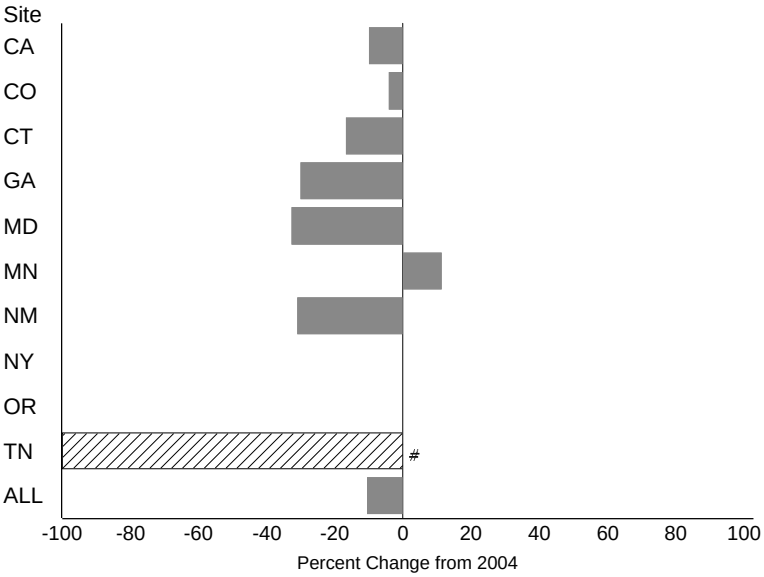
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Shigella flexneri

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

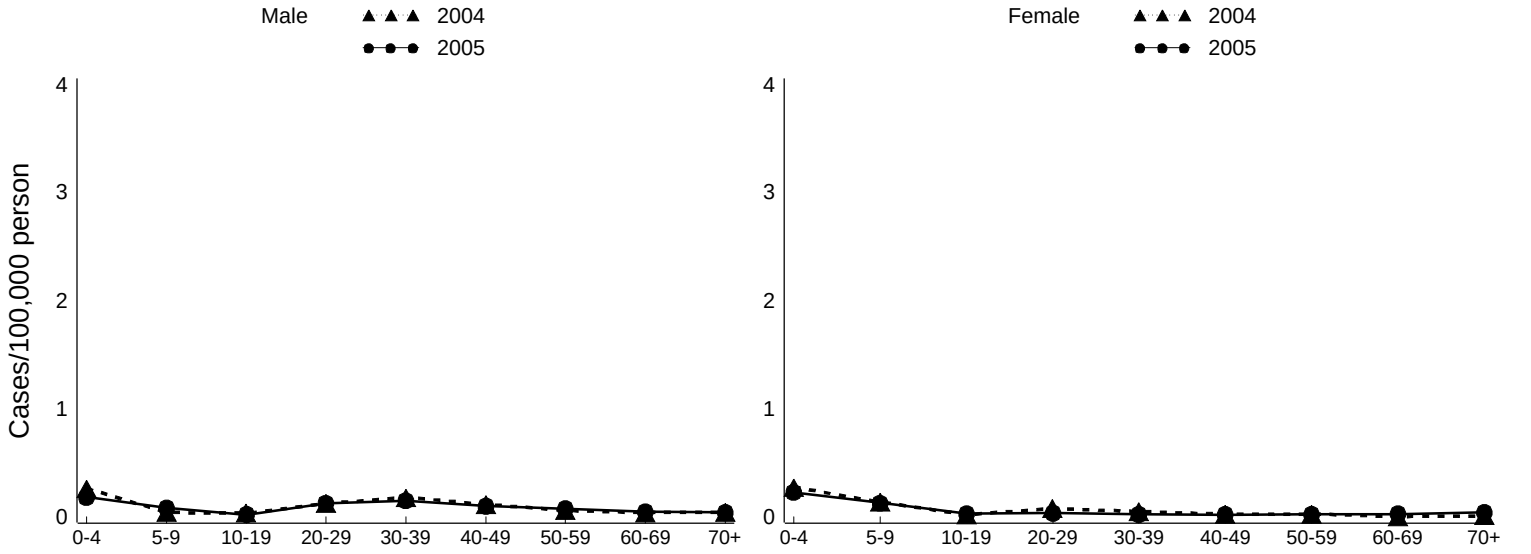


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	64	1.991	71	2.209	80	2.479
CO	24	0.950	25	0.990	25	1.042
CT	15	0.431	18	0.517	14	0.416
GA	49	0.564	70	0.806	58	0.683
MD	27	0.490	40	0.726	29	0.616
MN	20	0.395	18	0.356	22	0.435
NM	29	1.547	42	2.240	42	2.240
NY	9	0.209	9	0.209	7	0.226
OR	17	0.478	17	0.478	29	0.829
TN	0	0.000	17	0.291	10	0.253
ALL	254	0.664	327	0.742	316	0.735

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

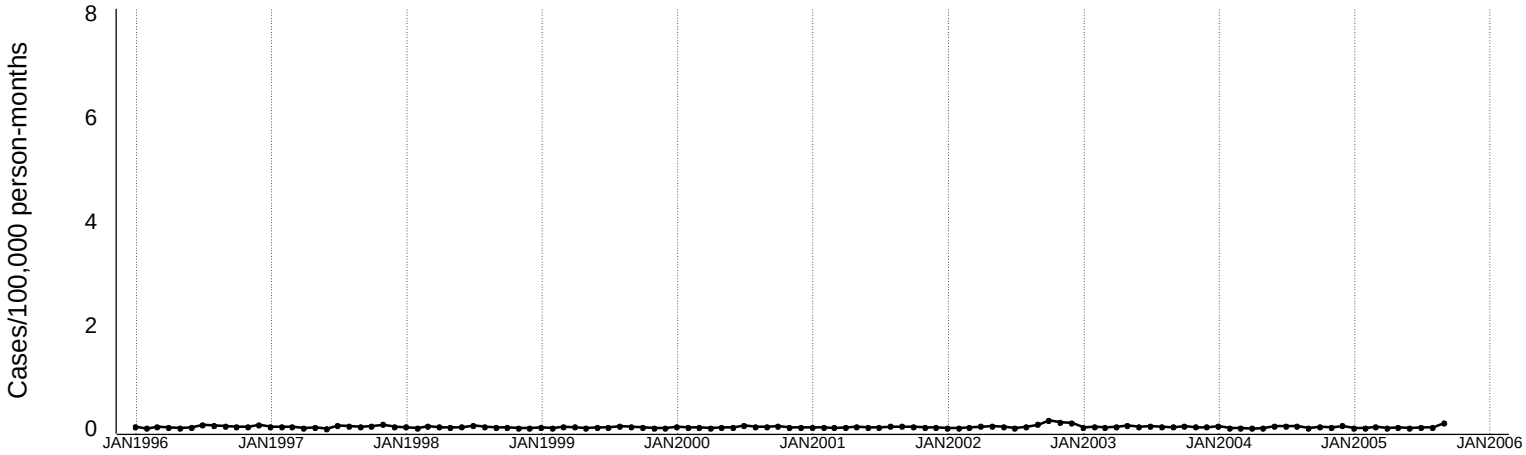
Calendar year through September: Rates for 2004 and 2005 by age group and sex



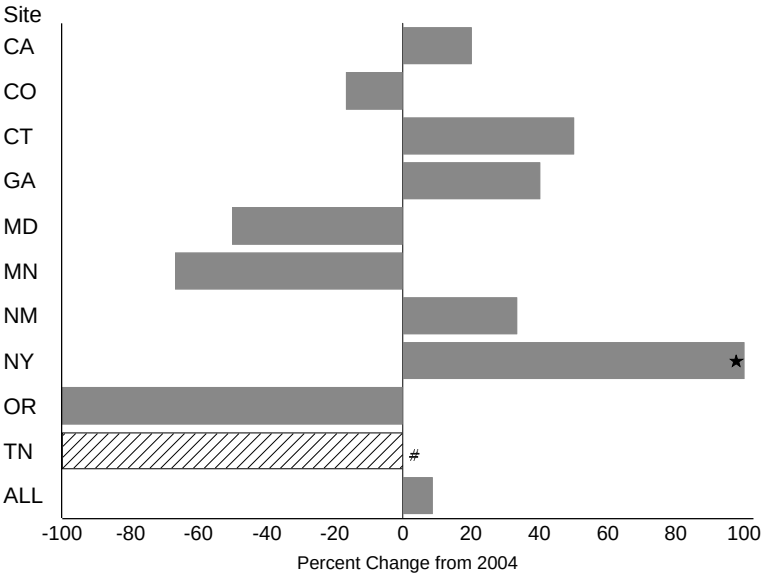
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Shigella, all others

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

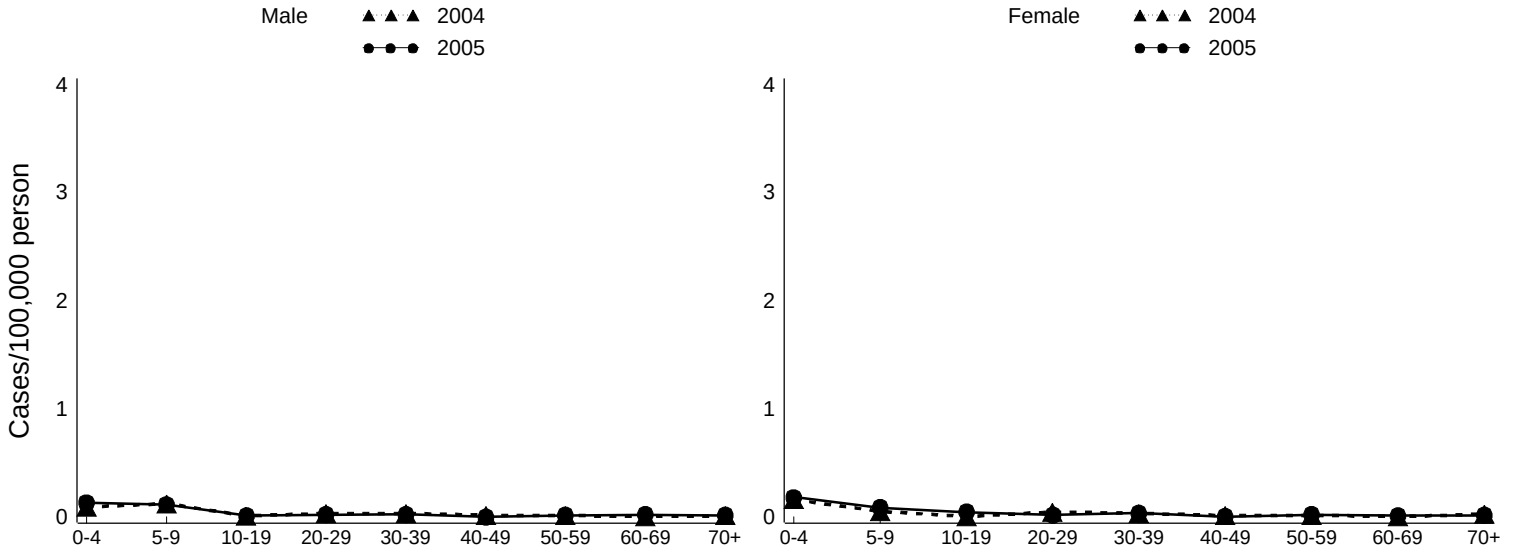


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	30	0.933	25	0.778	28	0.884
CO	5	0.198	6	0.238	7	0.306
CT	3	0.086	2	0.057	2	0.064
GA	77	0.887	55	0.633	57	0.662
MD	4	0.073	8	0.145	9	0.200
MN	1	0.020	3	0.059	5	0.096
NM	4	0.213	3	0.160	3	0.160
NY	7	0.162	2	0.046	1	0.044
OR	0	0.000	2	0.056	3	0.097
TN	0	0.000	33	0.565	23	0.567
ALL	131	0.343	139	0.315	139	0.358

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

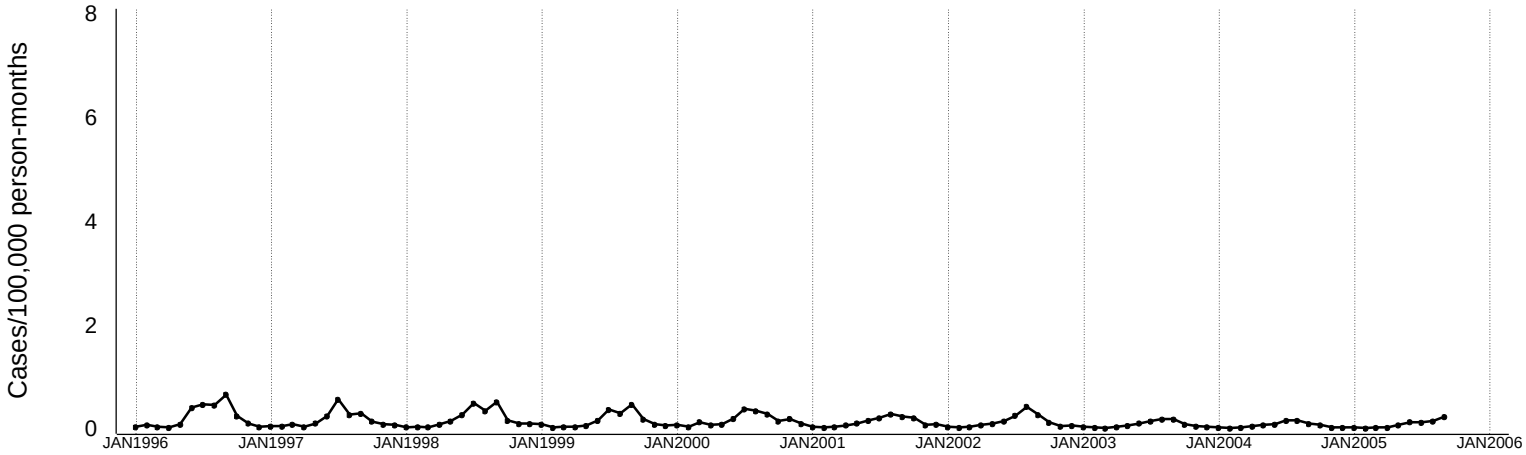
Calendar year through September: Rates for 2004 and 2005 by age group and sex



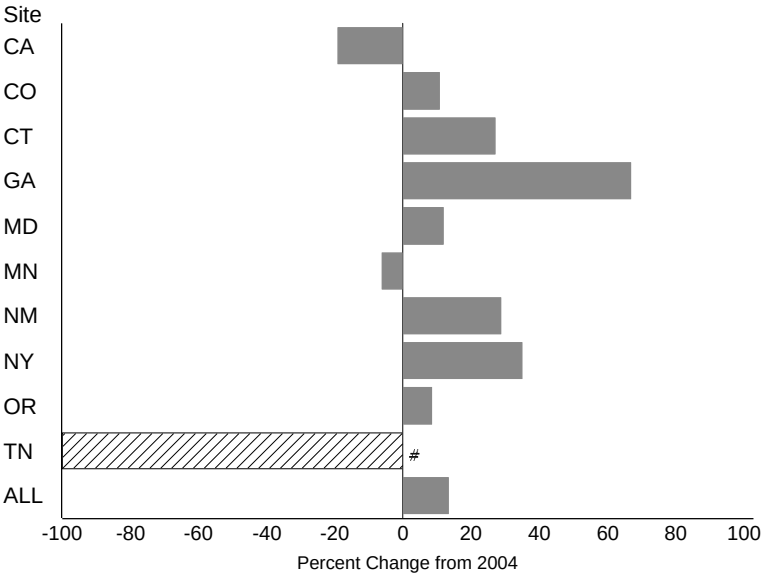
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

E. coli O157

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

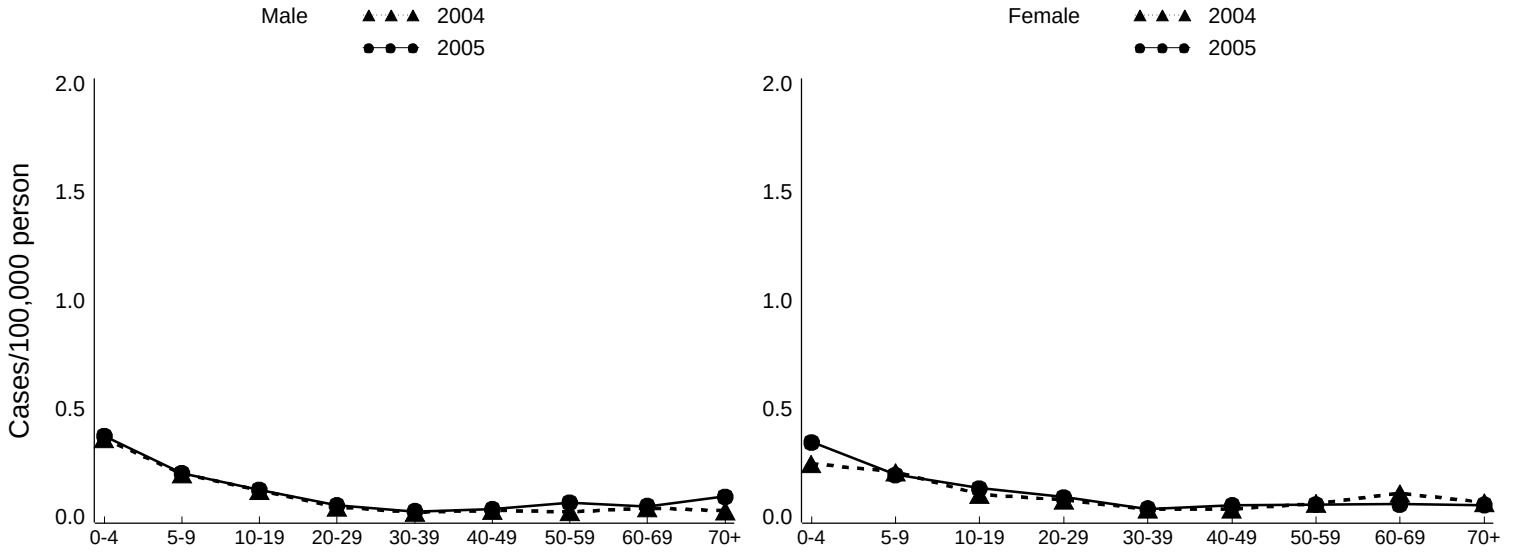


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	17	0.529	21	0.653	28	0.872
CO	21	0.831	19	0.752	34	1.408
CT	33	0.947	26	0.746	40	1.167
GA	25	0.288	15	0.173	29	0.340
MD	19	0.345	17	0.309	17	0.394
MN	94	1.858	100	1.977	136	2.722
NM	9	0.480	7	0.373	7	0.373
NY	62	1.437	46	1.066	42	1.470
OR	52	1.461	48	1.348	88	2.512
TN	0	0.000	39	0.668	28	0.732
ALL	332	0.869	338	0.767	450	1.194

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

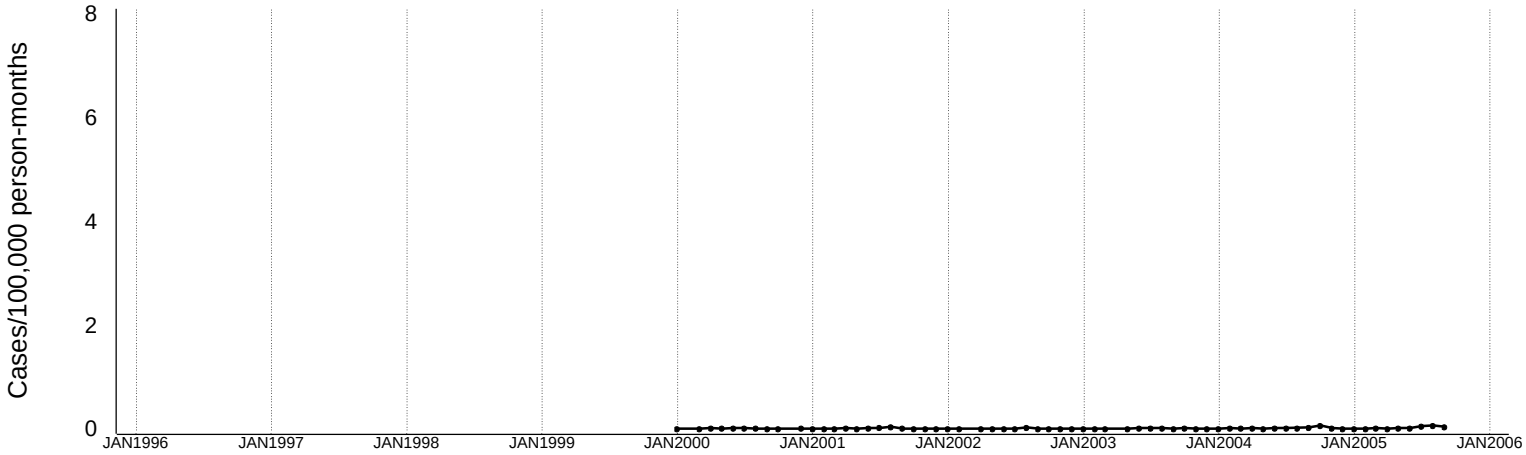
Calendar year through September: Rates for 2004 and 2005 by age group and sex



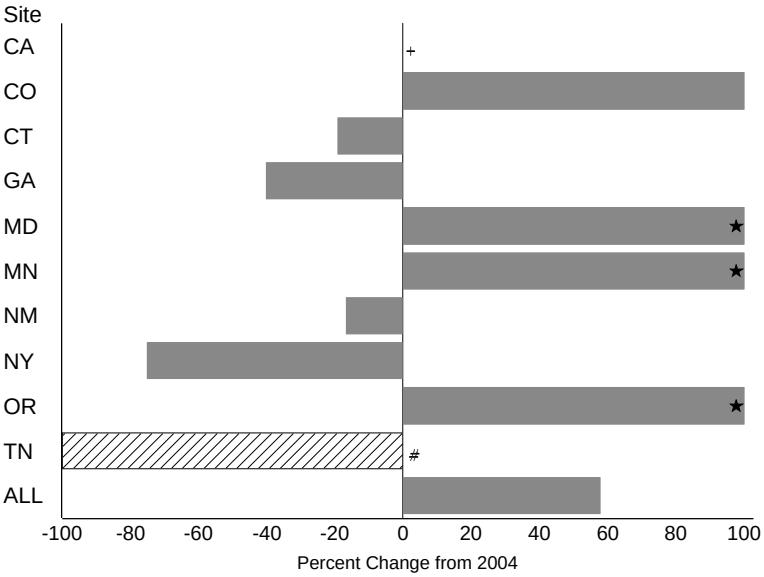
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

STEC Non-O157

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

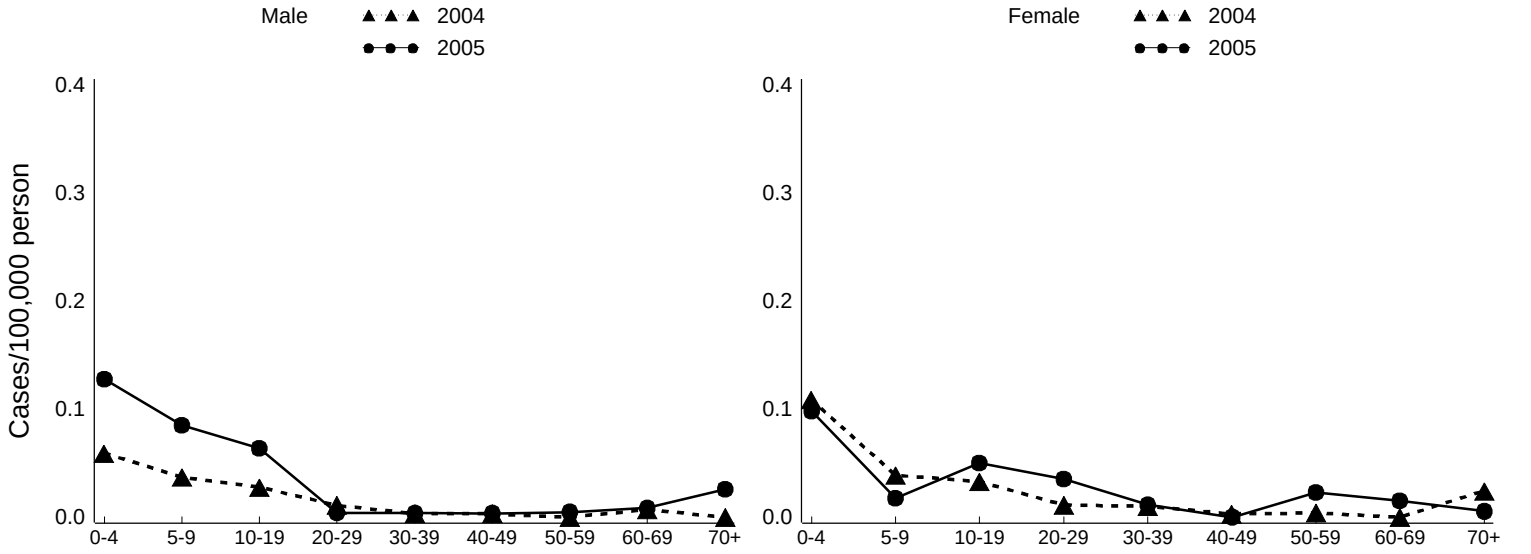


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	1	0.031	0	0.000	0	0.000
CO	2	0.079	1	0.040	2	0.076
CT	17	0.488	21	0.603	16	0.468
GA	3	0.035	5	0.058	3	0.033
MD	33	0.599	9	0.163	2	0.041
MN	25	0.494	11	0.217	14	0.276
NM	5	0.267	6	0.320	6	0.320
NY	3	0.070	12	0.278	3	0.061
OR	4	0.112	1	0.028	2	0.068
TN	0	0.000	2	0.034	1	0.017
ALL	93	0.243	68	0.154	48	0.113

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

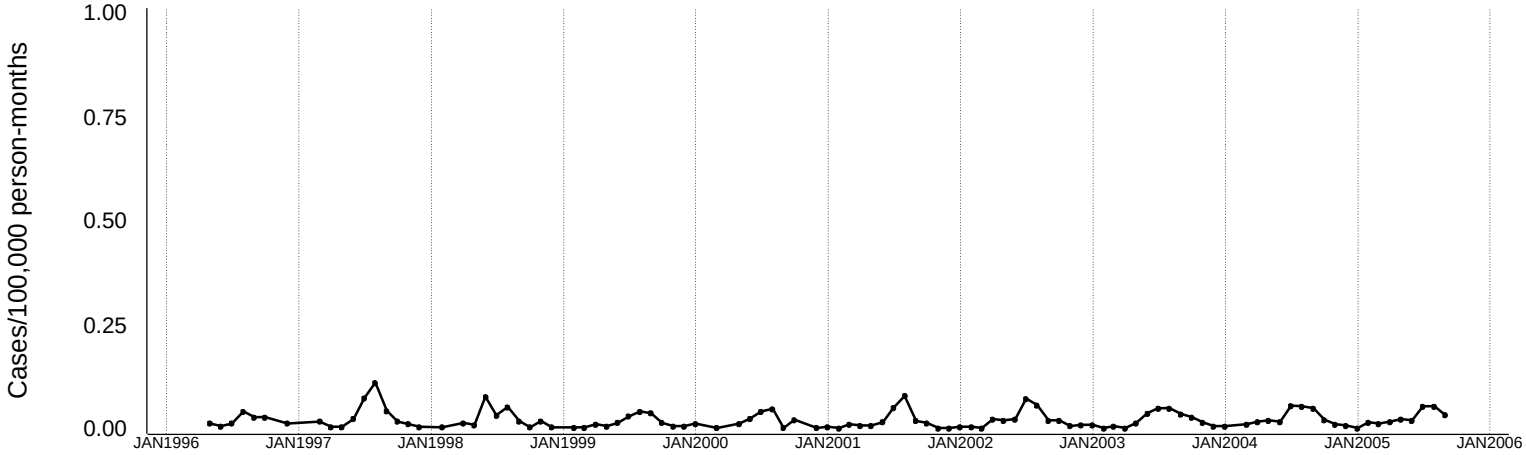
Calendar year through September: Rates for 2004 and 2005 by age group and sex



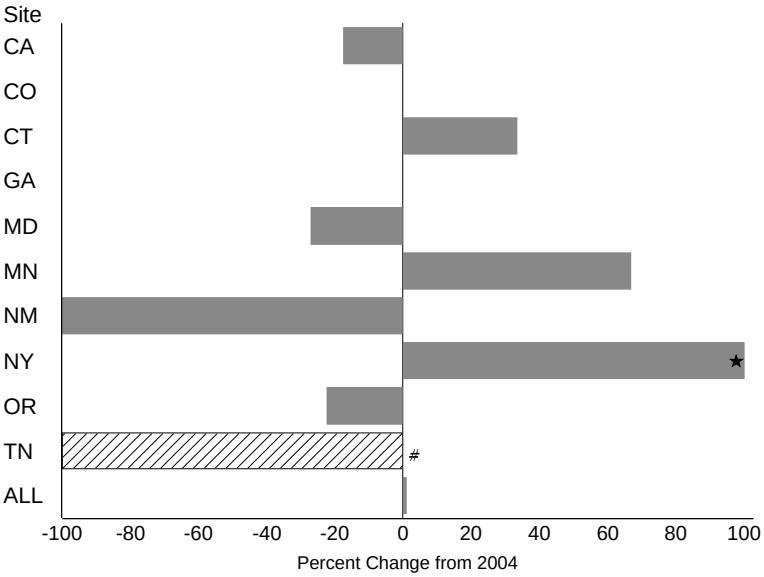
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Vibrio, all species

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

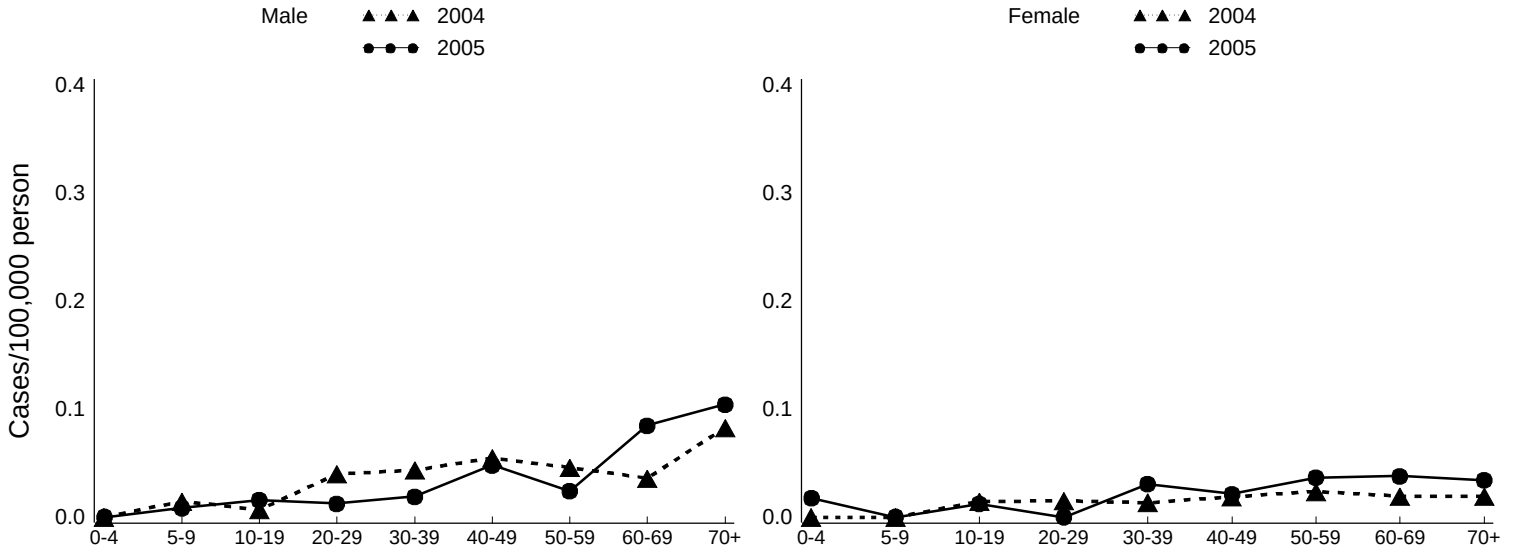


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	19	0.591	23	0.716	15	0.467
CO	6	0.238	6	0.238	4	0.147
CT	12	0.344	9	0.258	9	0.249
GA	17	0.196	17	0.196	17	0.203
MD	19	0.345	26	0.472	17	0.344
MN	5	0.099	3	0.059	3	0.064
NM	0	0.000	1	0.053	1	0.053
NY	6	0.139	1	0.023	3	0.078
OR	7	0.197	9	0.253	8	0.222
TN	0	0.000	9	0.154	5	0.128
ALL	91	0.238	104	0.236	81	0.207

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

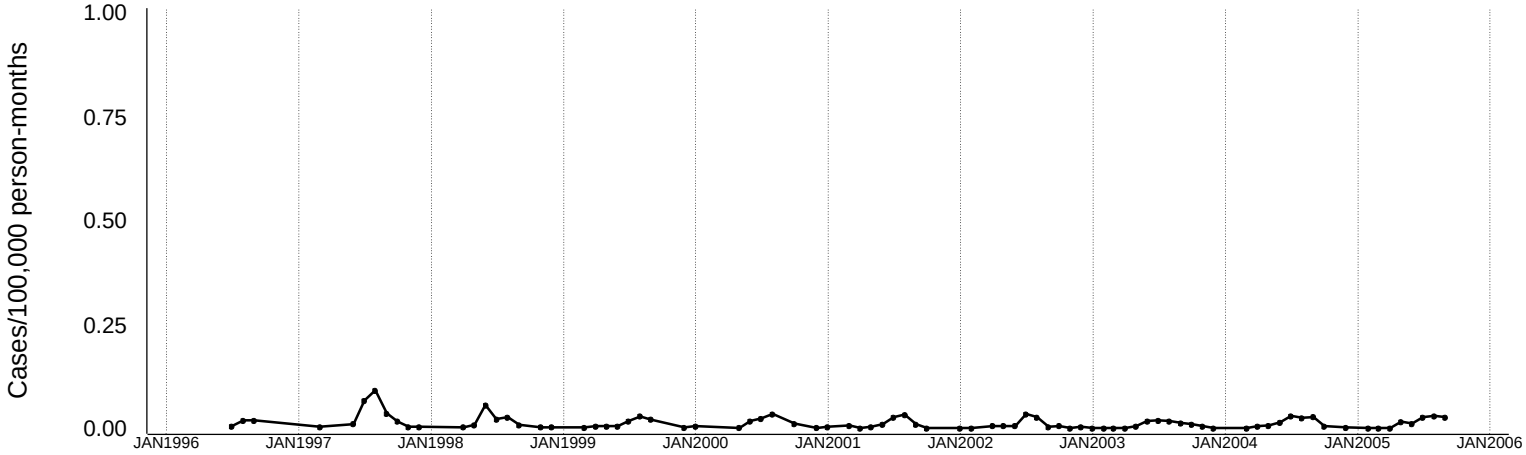
Calendar year through September: Rates for 2004 and 2005 by age group and sex



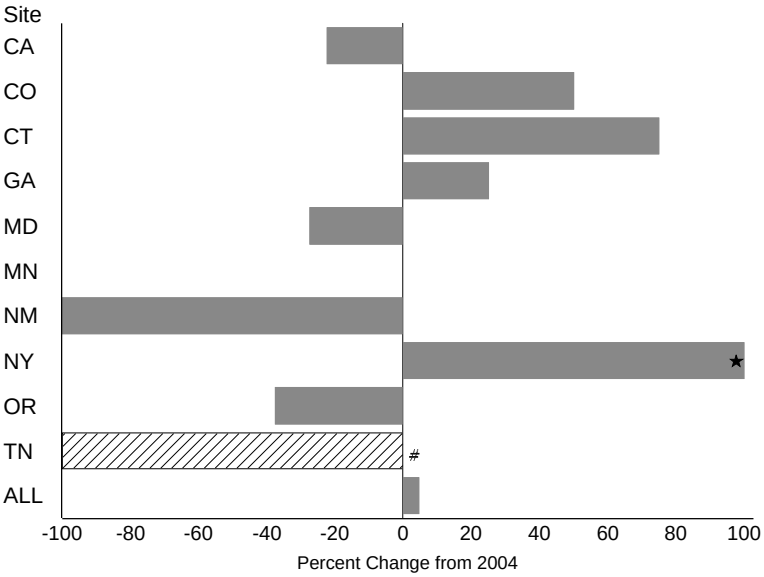
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Vibrio parahaemolyticus

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

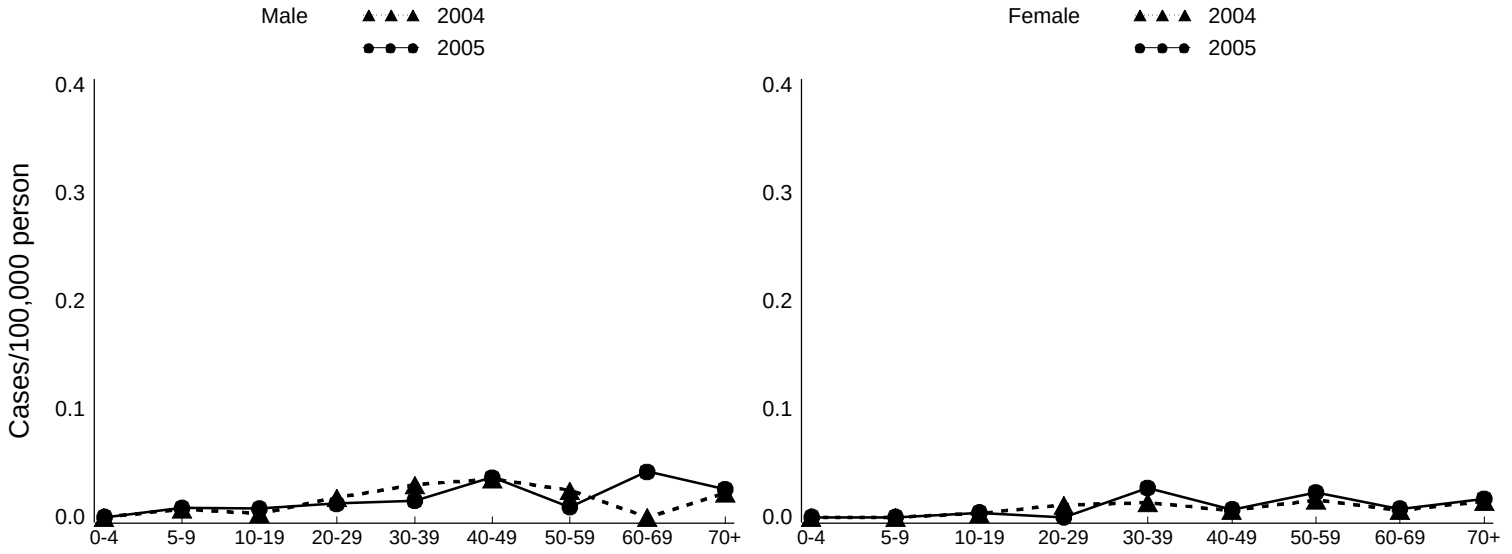


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	14	0.436	18	0.560	11	0.349
CO	6	0.238	4	0.158	1	0.040
CT	7	0.201	4	0.115	5	0.133
GA	5	0.058	4	0.046	4	0.049
MD	8	0.145	11	0.200	8	0.166
MN	1	0.020	1	0.020	1	0.024
NM	0	0.000	1	0.053	1	0.053
NY	3	0.070	1	0.023	1	0.027
OR	5	0.140	8	0.225	6	0.182
TN	0	0.000	2	0.034	2	0.035
ALL	49	0.128	54	0.123	40	0.103

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

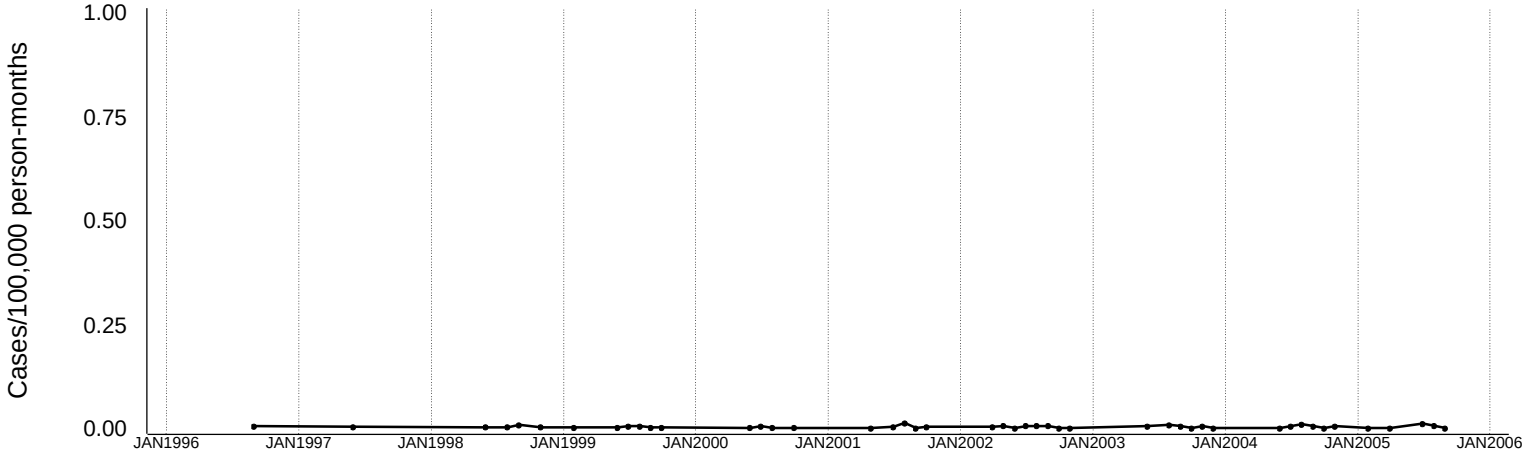
Calendar year through September: Rates for 2004 and 2005 by age group and sex



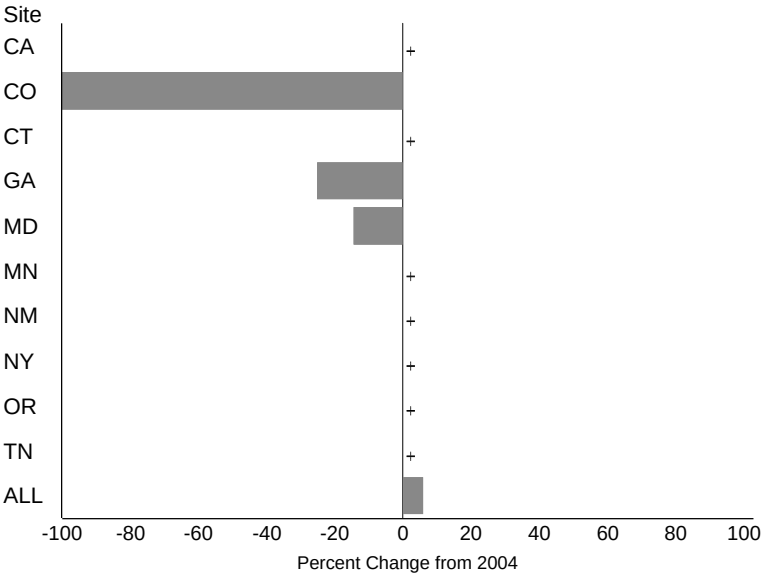
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Vibrio vulnificus

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

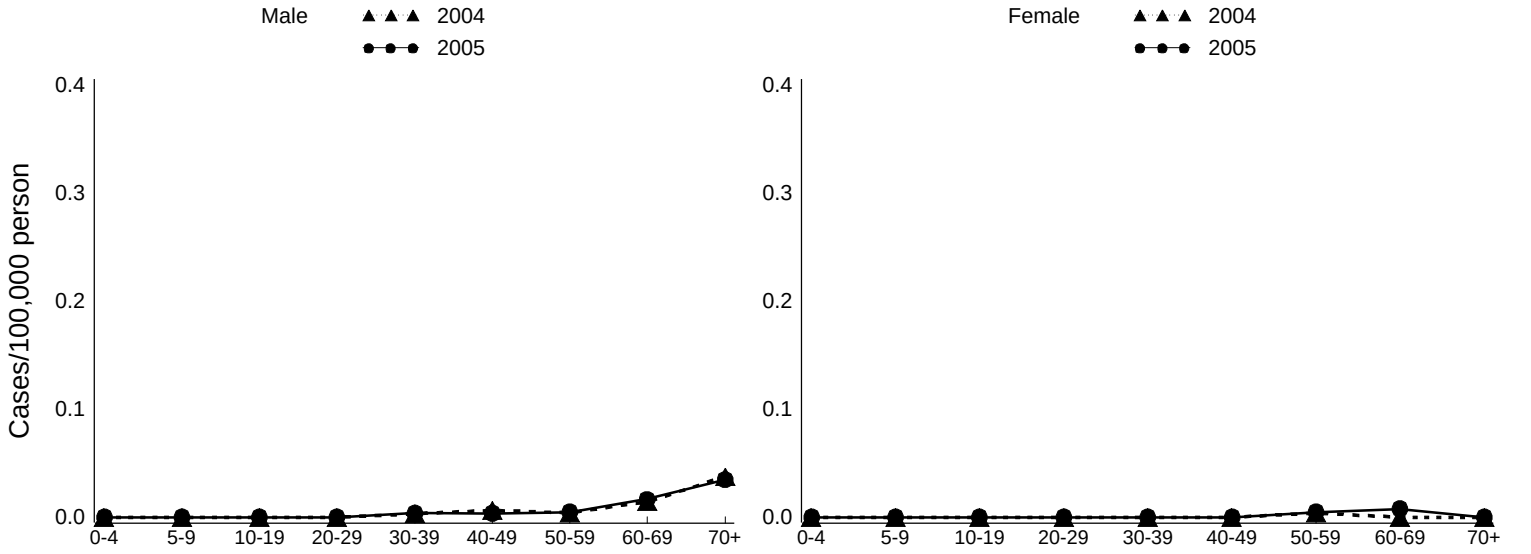


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	0	0.000	0	0.000	0	0.012
CO	0	0.000	1	0.040	0	0.010
CT	0	0.000	0	0.000	0	0.006
GA	3	0.035	4	0.046	4	0.044
MD	6	0.109	7	0.127	4	0.079
MN	1	0.020	0	0.000	0	0.000
NM	0	0.000	0	0.000	0	0.000
NY	1	0.023	0	0.000	0	0.000
OR	0	0.000	0	0.000	0	0.006
TN	0	0.000	0	0.000	1	0.038
ALL	11	0.029	12	0.027	10	0.026

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

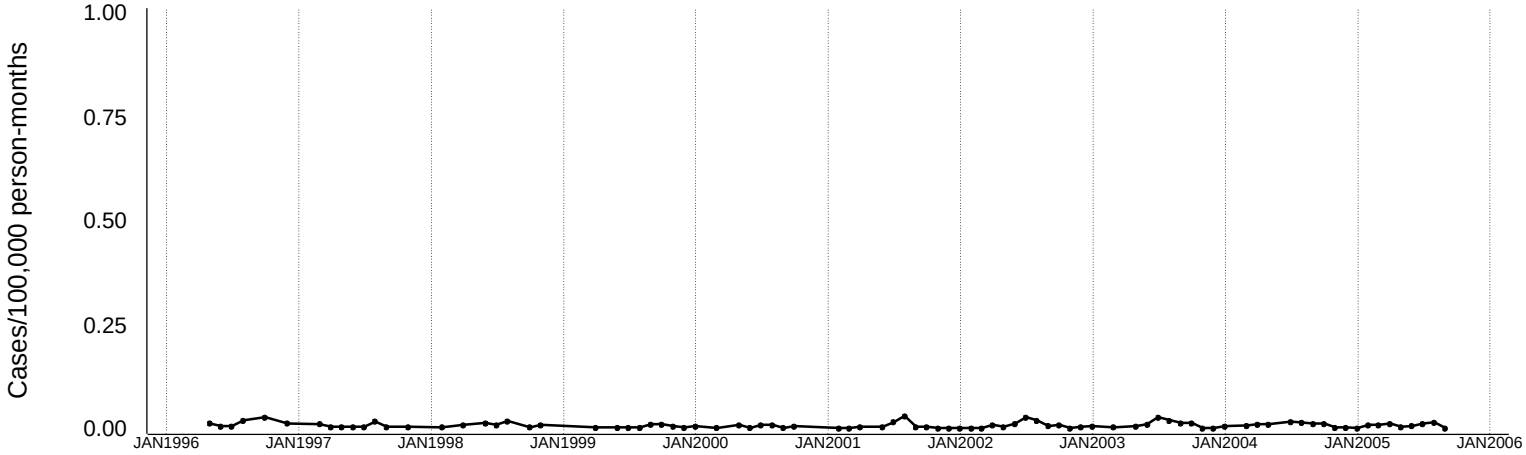
Calendar year through September: Rates for 2004 and 2005 by age group and sex



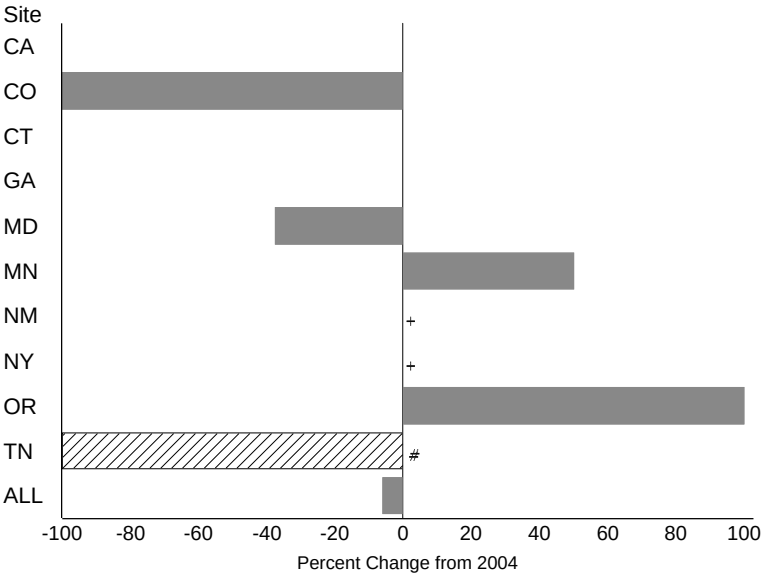
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Vibrio, all others

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

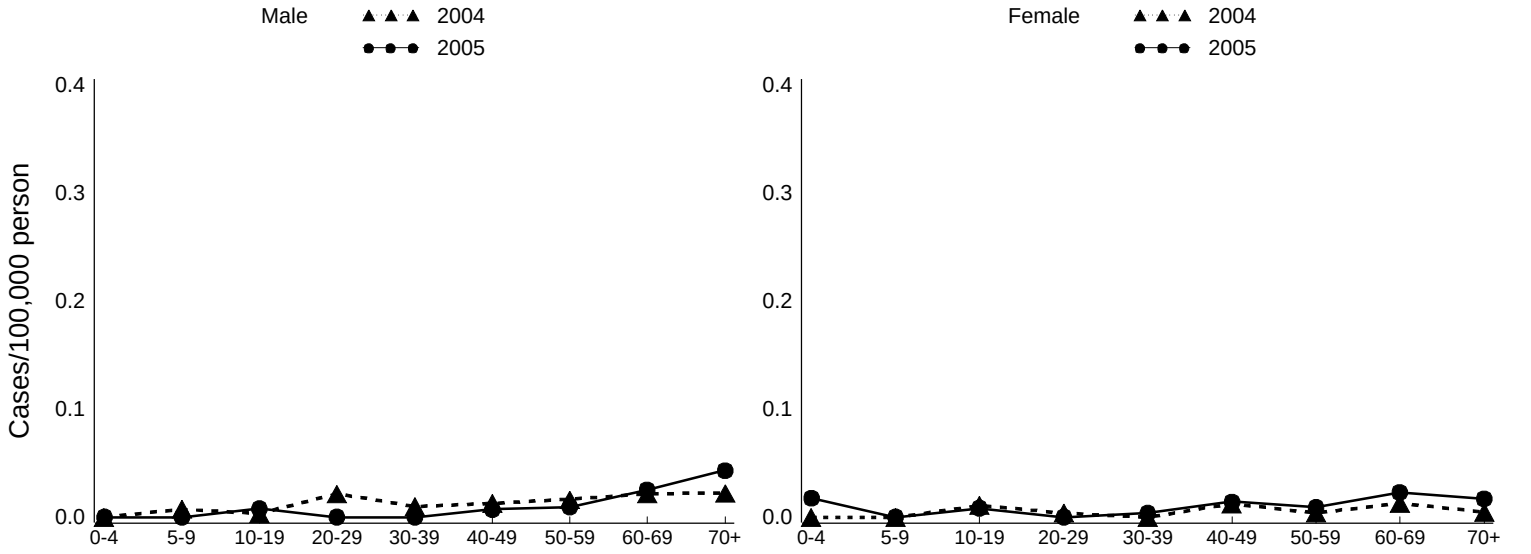


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	5	0.156	5	0.156	3	0.106
CO	0	0.000	1	0.040	2	0.098
CT	5	0.144	5	0.144	4	0.110
GA	9	0.104	9	0.104	9	0.110
MD	5	0.091	8	0.145	5	0.099
MN	3	0.059	2	0.040	2	0.040
NM	0	0.000	0	0.000	0	0.000
NY	2	0.046	0	0.000	2	0.051
OR	2	0.056	1	0.028	1	0.034
TN	0	0.000	7	0.120	3	0.055
ALL	31	0.081	38	0.086	31	0.079

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

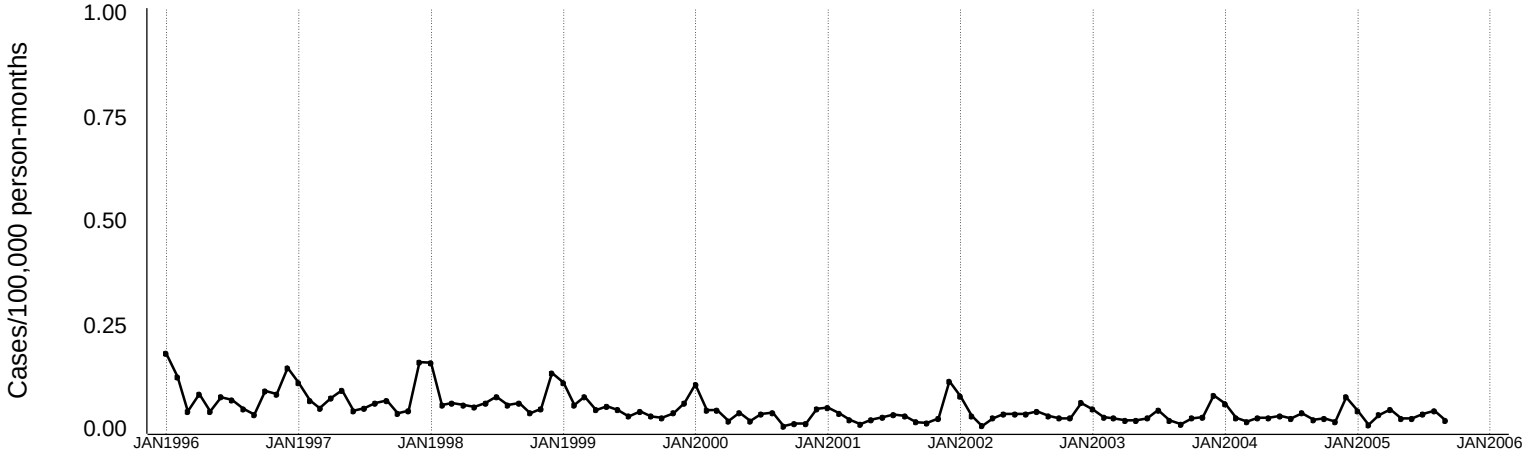
Calendar year through September: Rates for 2004 and 2005 by age group and sex



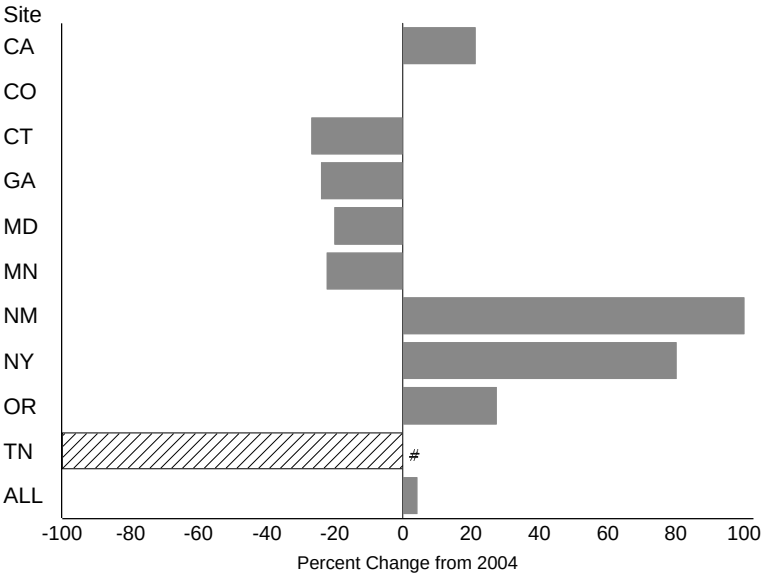
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Yersinia

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

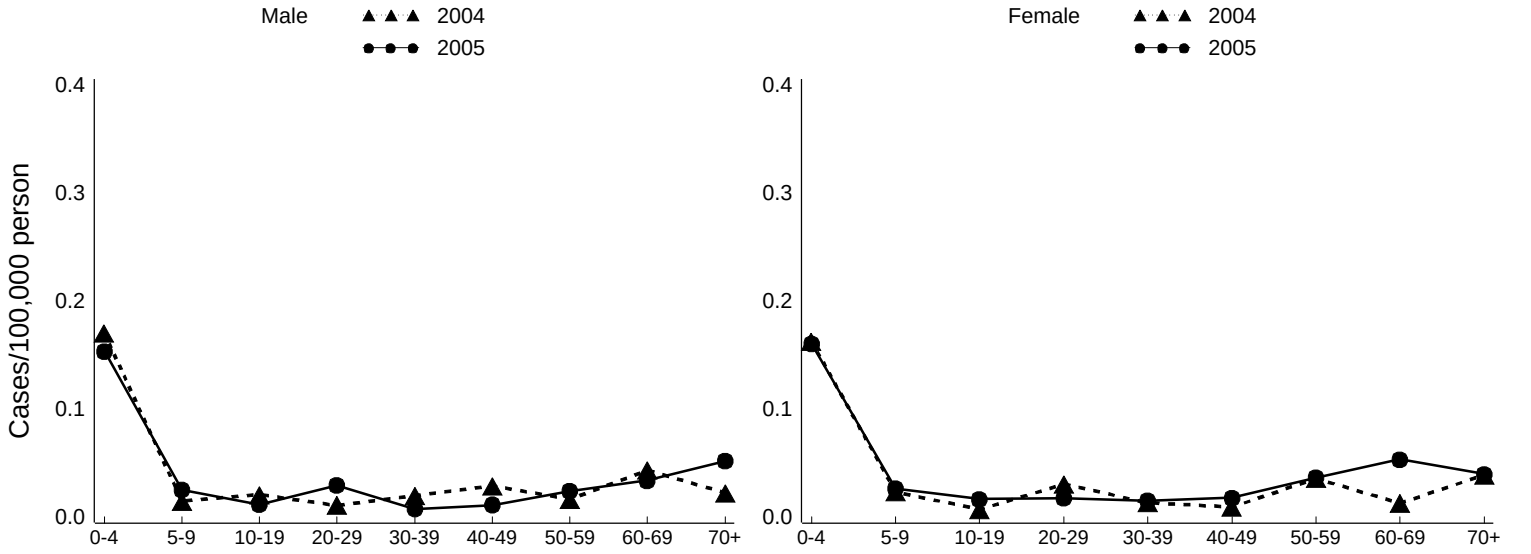


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	23	0.716	19	0.591	17	0.523
CO	6	0.238	6	0.238	6	0.243
CT	11	0.316	15	0.431	11	0.312
GA	19	0.219	25	0.288	27	0.315
MD	4	0.073	5	0.091	8	0.199
MN	14	0.277	18	0.356	13	0.259
NM	2	0.107	1	0.053	1	0.053
NY	18	0.417	10	0.232	9	0.280
OR	14	0.393	11	0.309	9	0.251
TN	0	0.000	13	0.223	12	0.309
ALL	111	0.290	123	0.279	113	0.295

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

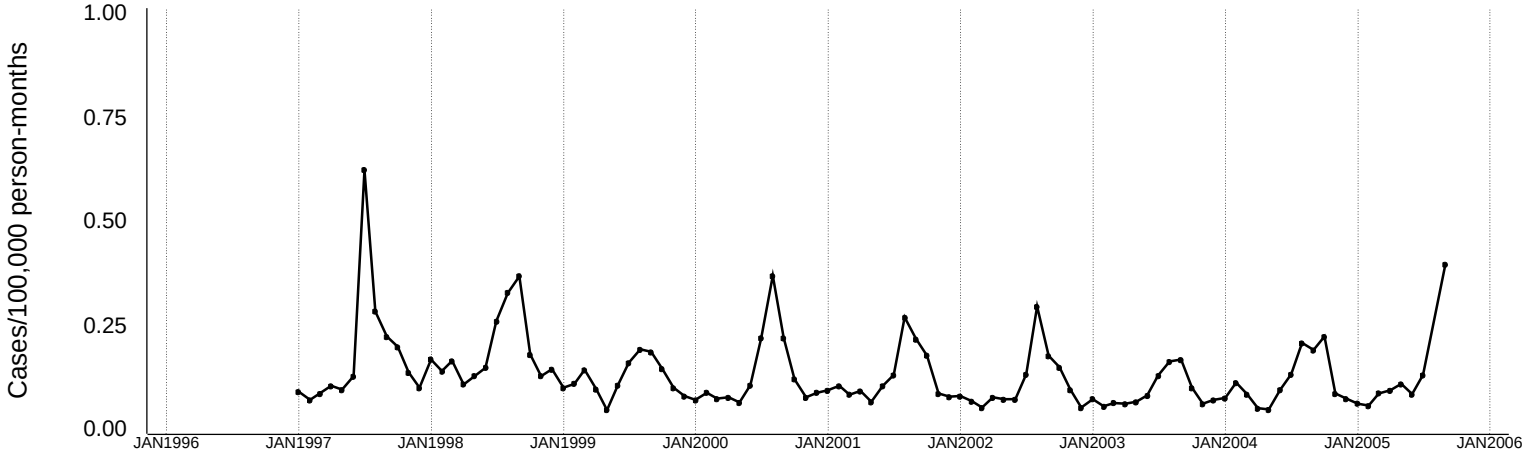
Calendar year through September: Rates for 2004 and 2005 by age group and sex



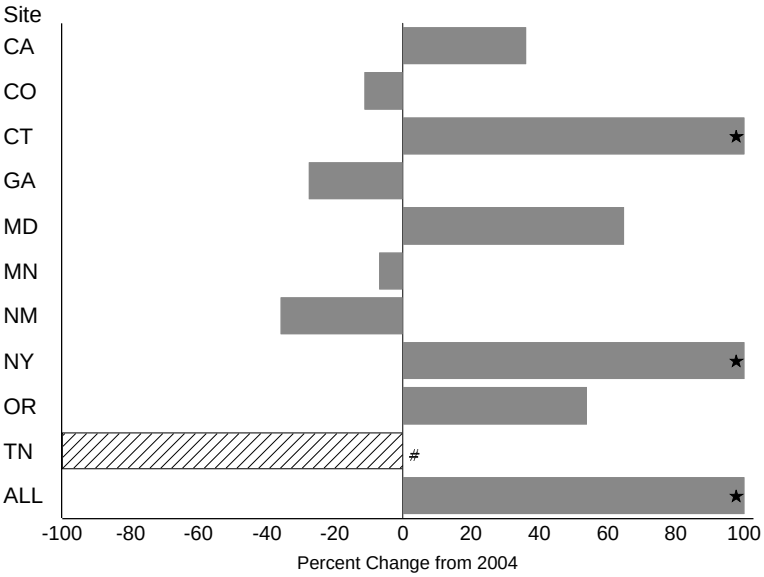
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Cryptosporidium

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

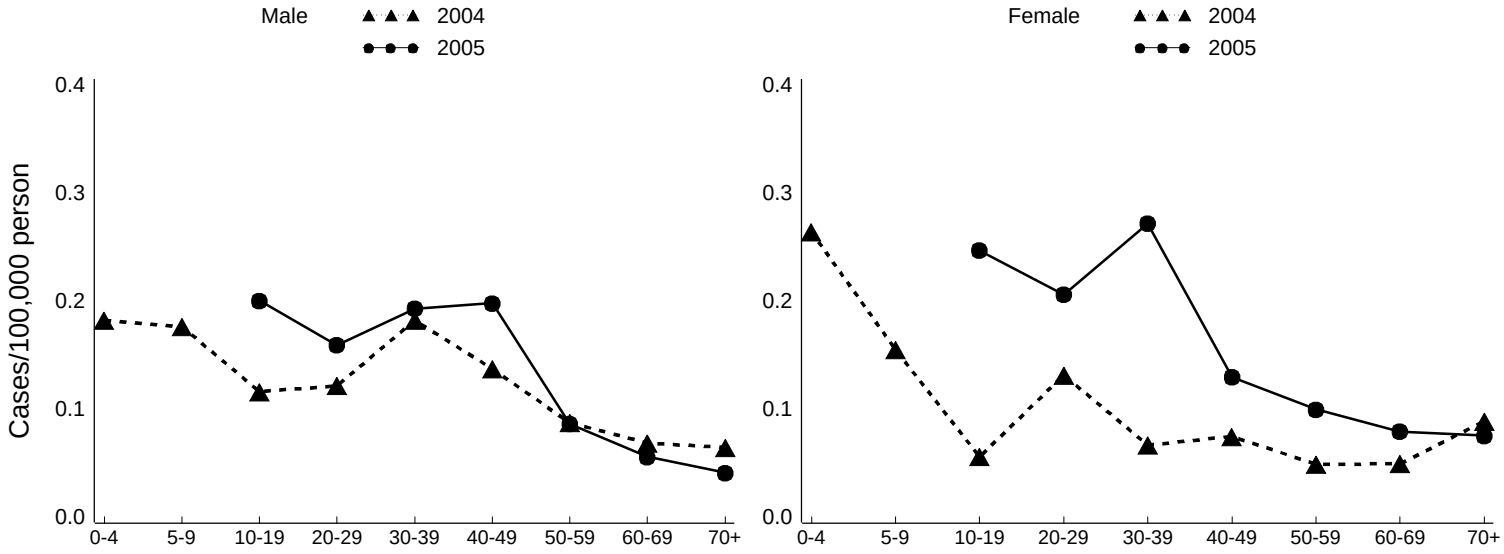


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	34	0.608	25	0.447	37	0.604
CO	16	0.633	18	0.713	14	0.576
CT	68	1.952	29	0.833	20	0.585
GA	100	1.151	138	1.589	115	1.354
MD	28	0.508	17	0.309	15	0.324
MN	110	2.174	118	2.332	147	2.937
NM	9	0.480	14	0.747	14	0.747
NY	551	12.77	38	0.881	27	0.831
OR	40	1.124	26	0.730	29	0.831
TN	0	0.000	37	0.633	22	0.517
ALL	956	2.355	460	0.990	441	1.062

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

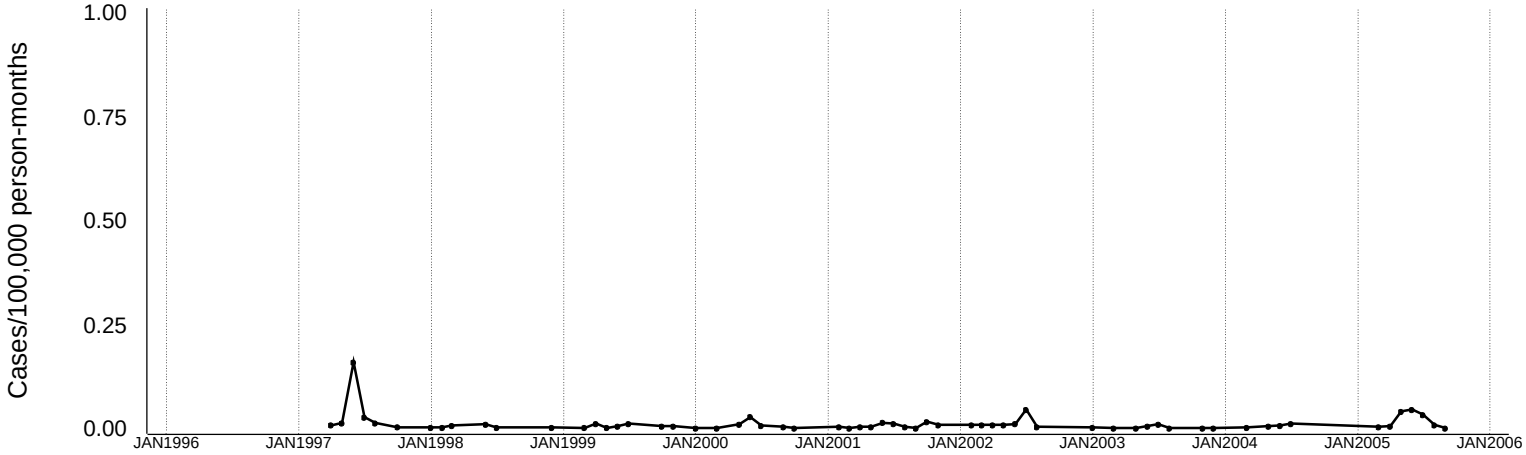
Calendar year through September: Rates for 2004 and 2005 by age group and sex



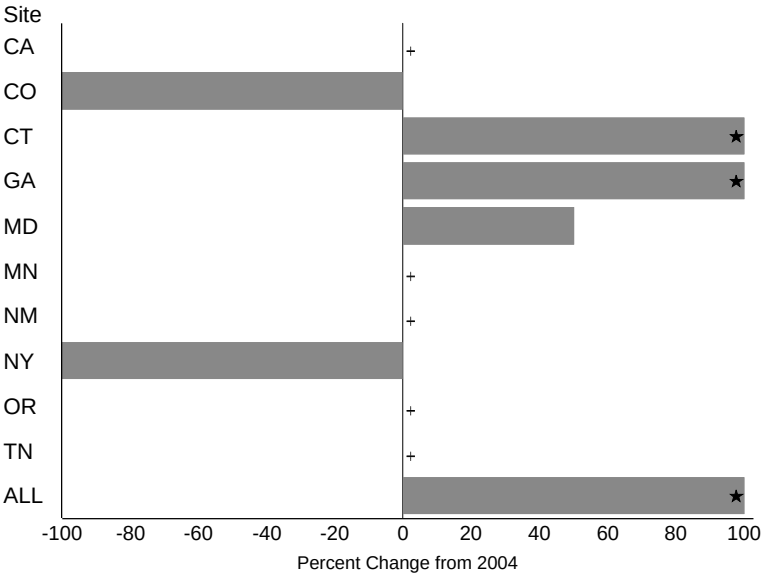
Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

Cyclospora

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-September 2005



Calendar year through September: Percent change in rates between 2004 and 2005 by site

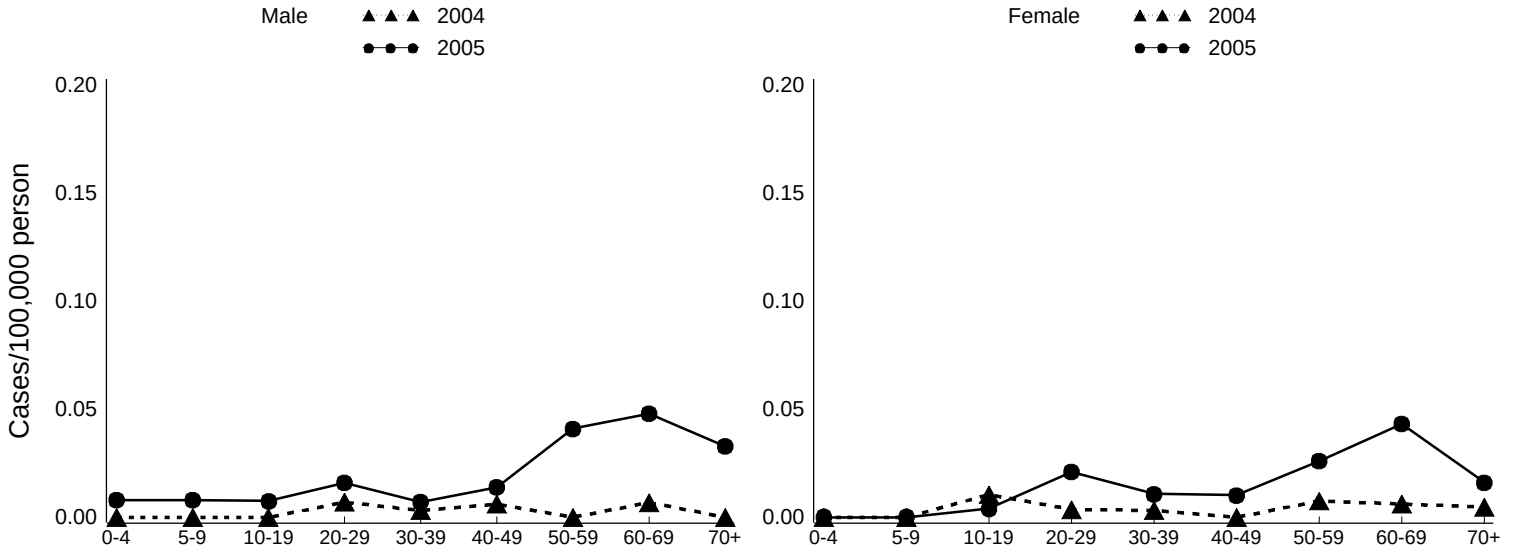


* Change exceeds 100%, +Percent increase cannot be calculated because 2004 rate is 0
# 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction.

	2005		2004		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	1	0.018	0	0.000	2	0.029
CO	0	0.000	3	0.119	1	0.030
CT	35	1.005	7	0.201	5	0.133
GA	13	0.150	2	0.023	12	0.146
MD	3	0.054	2	0.036	1	0.015
MN	0	0.000	0	0.000	0	0.000
NM	4	0.213	0	0.000	0	0.000
NY	0	0.000	1	0.023	2	0.061
OR	4	0.112	0	0.000	0	0.000
TN	0	0.000	0	0.000	0	0.007
ALL	60	0.148	15	0.032	23	0.056

*year 2000-2004 except for CO (2001-2004), NM (2004-)
^cases/100,000 person

Calendar year through September: Rates for 2004 and 2005 by age group and sex



Data source: Preliminary FoodNet data, subject to change, not for public distribution.
Note: 2005 TN data entered but not available at CDC because of NEDSS PAM malfunction. Report date: 01-November-2005

HUS Surveillance, 2005

Data as of October 21, 2005

Site	All cases (N=70)												In catchment (N=55)											
	<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	--	6	--	2	0 (0)	0	--	0	--	0	--	0	0.0	3	0.0	0	0.0	0	0.0	0	0.0	0	0.00
CO	0	--	8	0 (0)	0	--	0	--	0	--	0	--	0	0.0	3	0.0	0	0.0	0	0.0	0	0.0	0	0.00
CT	0	--	1	0 (0)	1	0 (0)	1	0 (0)	1	0 (0)	0	--	0	0.0	1	0.0	1	0.0	1	0.0	1	0.0	0	0.00
GA	0	--	4	1 (25)	0	--	0	--	1	1 (100)	1	1 (100)	0	0.0	3	0.0	0	0.0	0	0.0	1	0.0	0	0.00
MD	0	--	1	0 (0)	1	0 (0)	0	--	0	--	0	--	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.00
MN	0	--	7	0 (0)	5	0 (0)	2	0 (0)	2	0 (0)	0	--	0	0.0	7	0.0	5	0.0	2	0.0	2	0.0	0	0.00
NM	1	1 (100)	0	--	0	--	0	--	0	--	0	--	1	3.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.00
NY	0	--	1	0 (0)	2	0 (0)	1	0 (0)	1	0 (0)	0	--	0	0.0	1	0.0	2	0.0	1	0.0	1	0.0	0	0.00
OR	0	--	5	0 (0)	0	--	0	--	0	--	0	--	0	0.0	5	0.0	0	0.0	0	0.0	0	0.0	0	0.00
TN	0	--	7	1 (100)	6	0 (0)	0	--	1	0 (0)	1	0 (0)	0	0.0	7	0.0	3	0.0	0	0.0	1	0.0	1	0.00
Total	**1**	**1 (100)**	**40**	**2 (5)**	**17**	**0 (0)**	**4**	**0 (0)**	**6**	**1 (17)**	**2**	**1 (50)**	**1**	**0.2**	**31**	645.2	**12**	0.0	**4**	0.0	**6**	0.0	**1**	**0.00**

*per 100,000 persons

Site	Laboratory Testing (all cases included N=70)							
	Shiga toxin	O157			Non-O157			
	No. pos/ tested (%)	No. culture pos/tested (%)	No. seropos[1]/ total serum collected[2] (%)	Total pos/total cases (by culture or serology)	Stx pos & SMAC-O157 neg No. pos/tested (%)	Non-O157 isolated	No. seropos[3]/ serum collected[2] (%)	Total pos/total cases (by culture or serology)
CA	4/5 (80)	4/8 (50)	0/2 (0)	4/8 (50)	0/6 (0)	-	0/2 (0)	0/8 (0)
CO	0/0 (-)	0/0 (-)	0/0 (-)	0/8 (0)	0/0 (-)	-	0/0 (-)	0/8 (0)
CT	1/1(100)	2/3 (67)	1/2 (50)	3/4 (75)	0/3 (0)	-	0/0 (-)	0/4 (0)
GA	1/1 (100)	4/4 (100)	0/0 (-)	4/6 (67)	0/3 (-)	-	0/0 (-)	0/6 (0)
MD	2/2 (100)	1/2 (50)	0/0 (-)	1/2 (50)	0/1 (0)	-	0/0 (-)	0/2 (0)
MN	9/16 (56)	9/16 (56)	0/7 (0)	9/16 (56)	6/16 (38)	-	0/7 (0)	6/16 (38)
NM	0/1 (0)	0/0 (-)	0/1 (0)	0/1 (0)	0/0 (-)	-	0/1 (0)	0/1 (0)
NY	1/1 (100)	2/4 (50)	0/2 (0)	2/5 (40)	0/4 (0)	-	0/2 (-)	0/5 (0)
OR	0/0 (-)	1/1 (100)	0/1 (0)	1/5 (20)	0/0 (-)	-	0/1 (0)	0/5 (0)
TN	1/1 (100)	9/13 (69)	0/4 (0)	9/15 (60)	0/13 (0)	-	0/4 (0)	0/15 (0)
Total	19/28 (68)	32/51 (63)	1/20 (5)	33/70 (47)	6/46 (13)	-	0/17 (0)	6/70 (9)

[1] No. seropos is from 1. a "yes" response to "Were significant levels of antibodies against an STEC detected?" 2. LPS type=O157 and 3. Titer IgG≥320 and a "positive" interpretation or Titer IgM ≥320 and a "positive" interpretation

[2] The denominator is a "yes" response to the question: "Was serum obtained from this patient?" It was assumed that each "yes" response resulted in a test.

[3] No. seropos is from 1. "yes" response to "Were significant levels of antibodies against an STEC detected?" 2. LPS type≠O157 and 3. Titer IgG≥320 and a "positive" interpretation or Titer IgM ≥ 320 and a "positive" interpretation

Data as of October 21, 2005

2005 Additional Tables

Site	Additional Tables (all cases included N=70)															
	O157				Non-O157				Serum							
	No. cultured/total cases		No. isolated/no. cultured		No. cultured for Non-O157/total cases		No. isolated/no. cultured		No. serum collected/ total cases		No. of significant Ab detected/ no. tested		No. tested Shiga/total cases		Outbreak related/total cases	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
CA	8/8	100	4/8	50	0/8	0	0/0	0	2/8	29	0/2	0	5/8	63	0/8	0
CO	0/8	0	0/0	0	0/8	0	0/0	0	0/8	0	0/0	0	0/8	0	2/8	25
CT	3/4	75	2/3	67	0/4	0	0/0	0	0/4	0	0/0	0	1/4	25	1/4	25
GA	4/6	67	4/4	100	0/6	0	0/0	0	0/6	0	0/0	0	1/6	17	0/6	0
MD	2/2	100	1/2	50	1/2	50	1/1	100	0/2	0	0/0	0	2/2	100	0/2	0
MN	16/16	100	9/16	56	7/16	44	0/7	0	7/16	44	0/4	0	1616	100	4/16	25
NM	0/1	0	0/0	0	0/1	0	0/0	0	1/1	100	0/1	0	1/1	100	0/1	0
NY	4/5	80	2/4	50	0/5	0	0/0	0	2/5	40	0/2	0	1/5	20	0/5	0
OR	1/5	20	1/1	100	0/5	0	0/0	0	1/5	20	0/1	0	0/5	0	1/5	20
TN	13/15	87	9/13	69	0/15	0	0/0	0	4/15	27	0/4	0	1/15	7	3/15	20
Total	51/70	73	32/51	63	8/70	11	1/8	13	17/70	25	0/17	0	28/70	40	11/70	16