Public Health Service
DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Disease Control and Prevention (CDC)

December 19, 2008

Foodborne Diseases Active Surveillance Network (FoodNet) Vision Meeting, March 5-6, 2009

Dear Colleague,

In collaboration with the United States Department of Agriculture and the United States Food and Drug Administration, we are pleased to invite you to the 2009 FoodNet Vision Meeting. The primary goal of this meeting is to review overall program accomplishments from previous years and to establish program goals and priorities for the upcoming year. The meeting will also focus on details specific to various projects (e.g., active surveillance, case-control studies) currently being undertaken by the FoodNet group and those projects that are in the planning phase. An integral part of this workshop is to have participation of the regulatory partners and partners from the FoodNet sites, including the FoodNet Principal Investigator, the FoodNet Project Coordinator, and the FoodNet Surveillance Officers. Each group will bring different ideas and perspectives to the meeting.

The FoodNet Vision Meeting will be hosted by the Centers for Disease Control and Prevention, Coordinating Center for Infectious Diseases, National Center for Zoonotic, Vectorborne and Enteric Diseases, Enteric Diseases Epidemiology Branch, FoodNet on March 5-6, 2009. Additionally, a half-day FoodNet scientific meeting focusing on *C. difficile* will be held on the afternoon of March 4th. FoodNet site coordinators will meet preceding the scientific meeting in the morning.

The Vision Meeting will take place in Building 19 of the CDC Roybal campus, Atlanta, Georgia. It will begin at 8:00 AM on Thursday, March 5th and adjourn at 12:30 PM Friday, March 6th. Please register for the meeting by **February 9, 2008** through the FoodNet conferences website at: http://www.cdc.gov/foodnet/conferences/2009/vision_meeting/registration_form.html or by contacting Daniel Chen at DLChen@cdc.gov. Information concerning hotel accommodations and transportation can be found at: http://www.cdc.gov/foodnet/conferences/2009/vision_meeting/vm2009.html. Please be advised that the deadline for hotel reservations is **February 2, 2009**. You are strongly encouraged to make reservations early as rooms will fill quickly.

***Due to strict CDC security policies, additional information is required for non-U.S. citizens. Please contact Daniel Chen immediately if you are a non-U.S. citizen and plan to attend the Vision Meeting.**

We look forward to seeing you and would like to take this opportunity to thank you in advance for your support and collaboration.

Sincerely,

Mary Patrick, MPH
Project Coordinator, FoodNet, CDC

Olga Henao, PhD
Acting Team Lead, FoodNet, CDC

Review of 2008 data and update on trends

1. Table 1. Comparison of number of cases and incidence* of bacterial and parasitic infections, 2007 and 2008, FoodNet data through November (data transmitted 12/18/08)

2. Table 2. Comparison of number of cases and incidence* of the top 20 *Salmonella* serotypes, 2007 and 2008, FoodNet data through November (data transmitted 12/18/08)

3. Table 3. Comparison of number of cases and incidence* of *Shigella* species, 2007 and 2008, FoodNet data through November (data transmitted 12/18/08)

4. Table 4. Comparison of number of cases and incidence* of Vibrio species, 2007 and 2008, FoodNet data through November (data transmitted 12/18/08)

5. Table 5. Number of cases by state, 2008 (based on data from Jan-Nov 2008)

6. Table 6. Number of cases by state, 2007 (based on data from Jan-Nov 2007)

7. Table 7. Number of cases of Salmonella and STEC O157 with outbreak and travel information, FoodNet 2007 and 2008

8. Table 8. Number of cases of Salmonella with outbreak and travel information, by serotype, FoodNet 2007 and 2008

9. Table 9. Travel data completeness, by year, by pathogen (includes only years with full data)

10. Table 10. Sporadic cases of Salmonella and STEC O157, FoodNet 2007 and 2008

11. Table 11. Sporadic cases of selected Salmonella serotypes, FoodNet 2007 and 2008

12. Figure 1. Percent change in the incidence of Salmonella infections in 2008 compared with the previous 3 years (2005-2007)

13. Figure 2. Percent change in the incidence of STEC O157 infections in 2008 compared with the previous 3 years (2005-2007)

14. Table 12. Predictions using the previous 3 years – bacterial pathogens

Table 1. Comparison of number of cases and incidence* of bacterial and parasitic infections, 2007 and 2008, FoodNet data through November
(data transmitted 12/18/08)

Pathogen	2007		2008		5 year Mean		2007 vs. 2008
	#	Rate	#	Rate	#	Rate	p-value**
Bacterial							
Campylobacter	5529	12.03	5320	11.58	5329	11.97	0.0448
Listeria	116	0.25	122	0.27	124	0.28	
Salmonella	6426	13.98	6820	14.84	6118	13.74	0.0006
Shigella	2617	5.69	2776	6.04	2415	5.44	0.0304
STEC O157	522	1.14	488	1.06	469	1.05	
STEC non-O157	268	0.58	176	0.38	148	0.33	0.0000
Vibrio	107	0.23	123	0.27	121	0.27	
Yersinia	157	0.34	136	0.30	144	0.32	
Parasitic							
Cryptosporidium	1187	2.58	945	2.06	872	1.94	0.0000
Cyclospora	13	0.03	15	0.03	30	0.07	

*cases/100,000 persons

**Only p-values for significant differences are shown

Table 2. Comparison of number of cases and incidence* of the top 20 *Salmonella* serotypes, 2007 and 2008, FoodNet data through November

(data transmitted 12/18/08)

Top 20 *Salmonella* Serotypes (ranked by 2007 final counts)	2007			2008				2007 vs. 2008 p-value**	% change in 2008 vs. 2007
	#	(%)	Rate	Rank	#	(%)	Rate		
Enteritidis	1011	(15.73)	2.20	1	1223	(17.93)	2.66	0.0000	20.97
Typhimurium	941	(14.64)	2.05	2	916	(13.43)	1.99		
Newport	644	(10.02)	1.40	3	609	(8.93)	1.33		
I 4,[5],12:i:-	340	(5.29)	0.74	6	240	(3.52)	0.52	0.0000	-29.41
Javiana	330	(5.14)	0.72	4	387	(5.67)	0.84	0.0333	17.27
Heidelberg	237	(3.69)	0.52	9	169	(2.48)	0.37	0.0007	-28.69
Montevideo	211	(3.28)	0.46	8	180	(2.64)	0.39		
Muenchen	186	(2.89)	0.40	7	199	(2.92)	0.43		
Tennessee	139	(2.16)	0.30	34	23	(0.34)	0.05	0.0000	-83.45
Saintpaul	119	(1.85)	0.26	5	387	(5.67)	0.84	0.0000	225.21
Oranienburg	97	(1.51)	0.21	14	72	(1.06)	0.16		
Braenderup	93	(1.45)	0.20	10	101	(1.48)	0.22		
Agona	87	(1.35)	0.19	11	91	(1.33)	0.20		
Infantis	80	(1.24)	0.17	13	76	(1.11)	0.17		
I 13,23:b:-	77	(1.20)	0.17	12	84	(1.23)	0.18		
Typhi	63	(0.98)	0.14	15	56	(0.82)	0.12		
Paratyphi B var L(+) Tartrate+	64	(1.00)	0.14	22	43	(0.63)	0.09	0.0428	-32.81
Thompson	63	(0.98)	0.14	16	56	(0.82)	0.12		
Bareilly	60	(0.93)	0.13	18	51	(0.75)	0.11		
Mbandaka	49	(0.76)	0.11	25	30	(0.44)	0.07	0.0330	-38.78

Overall Summary	2007			2008		
	#	(%)	Rate	#	(%)	Rate
Total number of *Salmonella* cases	6426		13.98	6820		14.84
Fully Serotyped	5975	(92.98)		6035	(88.49)	
Partially Serotyped	70	(1.09)		122	(1.79)	
Rough/Nonmotile	35	(0.54)		29	(0.43)	
Not Serotyped (missing or unknown)	346	(5.38)		634	(9.30)	

*cases/100,000 persons

**Only p-values for significant differences are shown

Table 3. Comparison of number of cases and incidence* of *Shigella* species, 2007 and 2008, FoodNet data through November
(data transmitted 12/18/08)

Shigella species	2007			2008			2007 vs. 2008
ranked by 2007 counts	#	(%)	Rate	#	(%)	Rate	p-value**
Total number of *Shigella* cases	2617		5.69	2776		6.04	0.0013
Sonnei	2133	(81.51)	4.64	2304	(83.00)	5.01	0.0103
Flexneri	330	(12.61)	0.72	267	(9.62)	0.58	0.0099
Boydii	13	(0.50)	0.03	16	(0.58)	0.03	
Dysenteriae	4	(0.15)	0.01	3	(0.11)	0.01	
Not Speciated (missing or unknown)	137	(5.24)		186	(6.70)		

*cases/100,000 persons

**Only p-values for significant differences are shown

Table 4. Comparison of number of cases and incidence* of *Vibrio* species, 2007 and 2008, FoodNet data through November
(data transmitted 12/18/08)

Vibrio species	2007			2008			2007 vs. 2008
ranked by 2007 counts	#	(%)	Rate	#	(%)	Rate	p-value**
Total number of *Vibrio* cases	107		0.23	123		0.27	
Parahaemolyticus	60	(56.07)	0.13	67	(54.47)	0.15	
Alginolyticus	17	(15.89)	0.04	7	(5.69)	0.02	0.0433
Vulnificus	13	(12.15)	0.03	18	(14.63)	0.04	
Cholerae	6	(5.61)	0.01	8	(6.50)	0.02	
Fluvialis	4	(3.74)	0.01	4	(3.25)	0.01	
Furnissii	1	(0.93)	0.00	0	(0.00)	0.00	
Mimicus	1	(0.93)	0.00	4	(3.25)	0.01	
Not Speciated (missing or unknown)	5	(4.67)		15	(12.20)		

*cases/100,000 persons

**Only p-values for significant differences are shown

Table 5. Number of cases by state, 2008 (based on data from Jan-Nov 2008)

Pathogen	State										Total
	CA	CO	CT	GA	MD	MN	NM	NY	OR	TN	
Bacterial											
Campylobacter	905	355	492	639	308	829	296	448	619	429	5320
Listeria	20	4	15	22	17	6	4	14	6	14	122
Salmonella	410	314	465	2133	749	690	464	400	372	823	6820
Shigella	145	73	38	1044	84	295	124	29	72	872	2776
STEC O157	33	82	24	38	31	116	13	47	53	51	488
STEC non-O157	2	24	17	22	18	52	22	14	4	1	176
STEC O Ag rough	0	1	2	0	0	2	0	0	0	0	5
STEC O Ag undetermined	0	1	0	0	0	6	0	0	0	0	7
STEC O Ag not tested	0	0	0	4	8	0	1	0	0	10	23
Vibrio	19	4	14	18	29	8	2	9	12	8	123
Yersinia	8	7	15	28	11	16	4	18	12	17	136
Parasitic											
Cryptospordium	39	25	38	223	36	224	159	112	51	38	945
Cyclospora	0	0	4	2	3	3	0	0	0	3	15
Total	1581	890	1124	4173	1294	2247	1089	1091	1201	2266	16956

Table 6. Number of cases by state, 2007 (based on data from Jan-Nov 2007)

Pathogen	State										Total
	CA	CO	CT	GA	MD	MN	NM	NY	OR	TN	
Bacterial											
Campylobacter	872	393	464	650	391	869	331	479	663	417	5529
Listeria	7	9	13	29	15	6	4	10	8	15	116
Salmonella	451	298	408	1913	828	674	271	491	300	792	6426
Shigella	172	77	44	1499	105	229	101	34	59	297	2617
STEC O157	38	30	42	44	20	161	9	58	69	51	522
STEC non-O157	7	55	26	42	35	41	22	11	5	24	268
STEC O Ag rough	0	0	1	0	0	1	1	0	0	3	6
STEC O Ag undetermined	1	5	0	0	2	1	1	0	0	1	11
STEC O Ag not tested	0	0	0	2	0	0	0	0	0	0	2
Vibrio	13	4	16	22	25	7	0	9	8	3	107
Yersinia	14	4	18	43	8	23	3	13	19	12	157
Parasitic											
Cryptospordium	38	102	40	219	32	289	117	87	126	137	1187
Cyclospora	1	0	3	3	1	0	2	2	0	1	13
Total	1614	977	1075	4466	1462	2301	862	1194	1257	1753	16961

Table 7. Number of cases of *Salmonella* and STEC O157 with outbreak and travel information, FoodNet 2007 and 2008

2008 (based on data from Jan-Nov)

Pathogen	Total Cases	Outbreak		International travel					
		Yes		Yes	No	Unknown		% travel (all cases)	% travel (exclude unk)
		n	(%)	n	n	n	(%)		
STEC O157	488	122	(25.0)	13	317	36	(7.4)	2.7	3.9
Salmonella	6820	350	(5.1)	433	3963	2074	(30.4)	6.3	9.8

2007 (based on data from Jan-Nov)

Pathogen	Total Cases	Outbreak		International travel					
		Yes		Yes	No	Unknown		% travel (all cases)	% travel (exclude unk)
		n	(%)	n	n	n	(%)		
STEC O157	522	97	(18.6)	16	475	31	(5.9)	3.1	3.3
Salmonella	6426	401	(6.2)	559	4327	1540	(24.0)	8.7	11.4

Table 8. Number of cases of *Salmonella* with outbreak and travel information, by serotype, FoodNet 2007 and 2008

2008 (based on data from Jan-Nov)

Rank	*Salmonella* serotype	Total Cases	Outbreak Yes n	Outbreak Yes (%)	International travel Yes n	International travel No n	International travel Unknown n	International travel Unknown (%)	% travel (all cases)	% travel (exclude unk)
1	ENTERITIDIS	1223	53	(4.3)	146	718	306	(25.0)	11.9	16.9
2	TYPHIMURIUM	916	10	(1.1)	28	638	240	(26.2)	3.1	4.2
3	NEWPORT	609	0	(0.0)	15	341	253	(41.5)	2.5	4.2
4	JAVIANA	387	0	(0.0)	9	164	214	(55.3)	2.3	5.2
5	SAINTPAUL	387	185	(47.8)	5	173	46	(11.9)	1.3	2.8
6	S. I 4,[5],12:i:-	239	15	(6.3)	10	131	61	(25.5)	4.2	7.1
7	MUENCHEN	199	8	(4.0)	6	95	90	(45.2)	3.0	5.9
8	MONTEVIDEO	180	8	(4.4)	4	105	63	(35.0)	2.2	3.7
9	HEIDELBERG	169	5	(3.0)	3	110	51	(30.2)	1.8	2.7
10	BRAENDERUP	101	2	(2.0)	4	63	32	(31.7)	4.0	6.0
11	AGONA	91	8	(8.8)	0	34	50	(54.9)	0.0	0.0
12	S. I 13,23:b:-	84	0	(0.0)	10	56	17	(20.2)	11.9	15.2
13	INFANTIS	76	0	(0.0)	8	46	22	(28.9)	10.5	14.8
14	ORANIENBURG	72	1	(1.4)	6	51	14	(19.4)	8.3	10.5
15	THOMPSON	56	0	(0.0)	5	38	13	(23.2)	8.9	11.6

2007 (based on data from Jan-Nov)

Rank	*Salmonella* serotype	Total Cases	Outbreak Yes n	Outbreak Yes (%)	International travel Yes n	International travel No n	International travel Unknown n	International travel Unknown (%)	% travel (all cases)	% travel (exclude unk)
1	ENTERITIDIS	1011	42	(4.2)	197	631	183	(18.1)	19.5	23.8
2	TYPHIMURIUM	941	38	(4.0)	38	657	246	(26.1)	4.0	5.5
3	NEWPORT	644	48	(7.5)	18	441	185	(28.7)	2.8	3.9
5	JAVIANA	330	5	(1.5)	6	235	89	(27.0)	1.8	2.5
9	SAINTPAUL	119	0	(0.0)	7	73	39	(32.8)	5.9	8.8
4	S. I 4,[5],12:i:-	340	54	(15.9)	10	275	55	(16.2)	2.9	3.5
8	MUENCHEN	186	3	(1.6)	11	111	64	(34.4)	5.9	9.0
7	MONTEVIDEO	211	56	(26.5)	4	140	67	(31.8)	1.9	2.8
6	HEIDELBERG	237	20	(8.4)	4	183	50	(21.1)	1.7	2.1
11	BRAENDERUP	93	1	(1.1)	7	58	28	(30.1)	7.5	10.8
12	AGONA	87	7	(8.0)	14	57	16	(18.4)	16.1	19.7
14	S. I 13,23:b:-	77	0	(0.0)	0	33	44	(57.1)	0.0	0.0
13	INFANTIS	80	4	(5.0)	7	62	11	(13.8)	8.8	10.1
10	ORANIENBURG	97	0	(0.0)	13	68	16	(16.5)	13.4	16.0
15	THOMPSON	63	0	(0.0)	5	43	15	(23.8)	7.9	10.4

Table 9. Travel data completeness, by year, by pathogen (includes only years with full data)

STEC O157

Year	Yes		No	Total cases with travel information		Unknown	Total cases
	n	(%)	n	n	(%)	n	n
2004	9	(2.5)	350	359	(89.3)	43	402
2005	13	(3.2)	393	406	(85.8)	67	473
2006	24	(4.3)	531	555	(94.1)	35	590
2007	16	(3.1)	498	514	(94.1)	32	546

Salmonella

Year	Yes		No	Total cases with travel information		Unknown	Total cases
	n	(%)	n	n	(%)	n	n
2004	408	(10.1)	3,651	4,059	(62.5)	2,439	6,498
2005	537	(13.2)	3,535	4,072	(62.6)	2,433	6,505
2006	622	(12.1)	4,523	5,145	(76.9)	1,544	6,689
2007	584	(11.3)	4,593	5,177	(75.8)	1,651	6,828

Table 10. Sporadic cases of *Salmonella* and STEC O157, FoodNet 2007 and 2008

2008 (based on data from Jan-Nov)

Pathogen	Total Cases	Outbreak related cases	Sporadic cases (removed outbreak cases)	Int'l travel related cases	Sporadic US cases (removed int travel rel cases)	% of total cases
STEC O157	488	122	366	13	**353**	**(72.3)**
Salmonella	6820	350	6470	433	**6037**	**(88.5)**

2007 (based on data from Jan-Nov)

Pathogen	Total Cases	Outbreak related cases	Sporadic cases (removed outbreak cases)	Int'l travel related cases	Sporadic US cases (removed int travel rel cases)	% of total cases
STEC O157	522	97	425	16	**409**	**(78.4)**
Salmonella	6426	401	6025	543	**5482**	**(85.3)**

Table 11. Sporadic cases of selected *Salmonella* serotypes, FoodNet 2007 and 2008

2008 (based on data from Jan-Nov)

Rank	*Salmonella* serotype	Total Cases	Outbreak related cases	Sporadic cases (removed outbreak cases)	Int'l travel related cases	Sporadic US cases (removed int travel rel cases)	% of total cases
1	ENTERITIDIS	1223	53	1170	146	1024	(83.7)
2	TYPHIMURIUM	916	10	906	28	878	(95.9)
3	NEWPORT	609	0	609	15	594	(97.5)
4	JAVIANA	387	0	387	9	378	(97.7)
5	SAINTPAUL	387	185	202	5	197	(50.9)
6	S. I 4,[5],12:i:-	239	15	224	10	214	(89.5)
7	MUENCHEN	199	8	191	6	185	(93.0)
8	MONTEVIDEO	180	8	172	4	168	(93.3)
9	HEIDELBERG	169	5	164	3	161	(95.3)
10	BRAENDERUP	101	2	99	4	95	(94.1)
11	AGONA	91	8	83	0	83	(91.2)
12	S. I 13,23:b:-	84	0	84	10	74	(88.1)
13	INFANTIS	76	0	76	8	68	(89.5)
14	ORANIENBURG	72	1	71	6	65	(90.3)
15	THOMPSON	56	0	56	5	51	(91.1)

2007 (based on data from Jan-Nov)

Rank	*Salmonella* serotype	Total Cases	Outbreak related cases	Sporadic cases (removed outbreak cases)	Int'l travel related cases	Sporadic US cases (removed int travel rel cases)	% of total cases
1	ENTERITIDIS	1011	42	969	184	785	(77.6)
2	TYPHIMURIUM	941	38	903	38	865	(91.9)
3	NEWPORT	644	48	596	18	578	(89.8)
5	JAVIANA	330	5	325	6	319	(96.7)
9	SAINTPAUL	119	0	119	7	112	(94.1)
4	S. I 4,[5],12:i:-	340	54	286	10	276	(81.2)
8	MUENCHEN	186	3	183	11	172	(92.5)
7	MONTEVIDEO	211	56	155	3	152	(72.0)
6	HEIDELBERG	237	20	217	4	213	(89.9)
11	BRAENDERUP	93	1	92	7	85	(91.4)
12	AGONA	87	7	80	14	66	(75.9)
14	S. I 13,23:b:-	77	0	77	0	77	(100.0)
13	INFANTIS	80	4	76	7	69	(86.3)
10	ORANIENBURG	97	0	97	13	84	(86.6)
15	THOMPSON	63	0	63	5	58	(92.1)

Figure 1. Percent change in the incidence of *Salmonella* infections in 2008 compared with the previous 3 years (2005-2007)

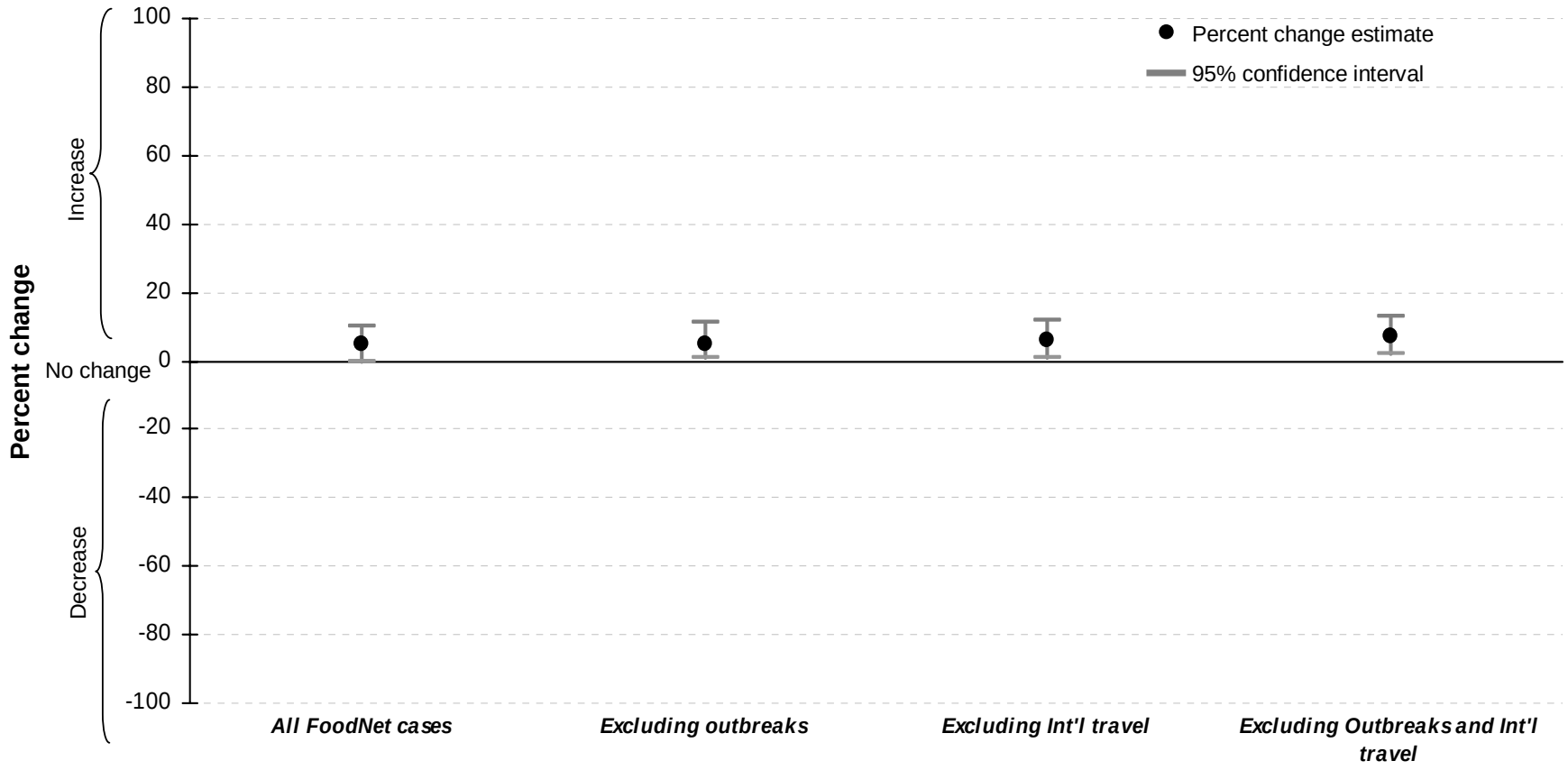
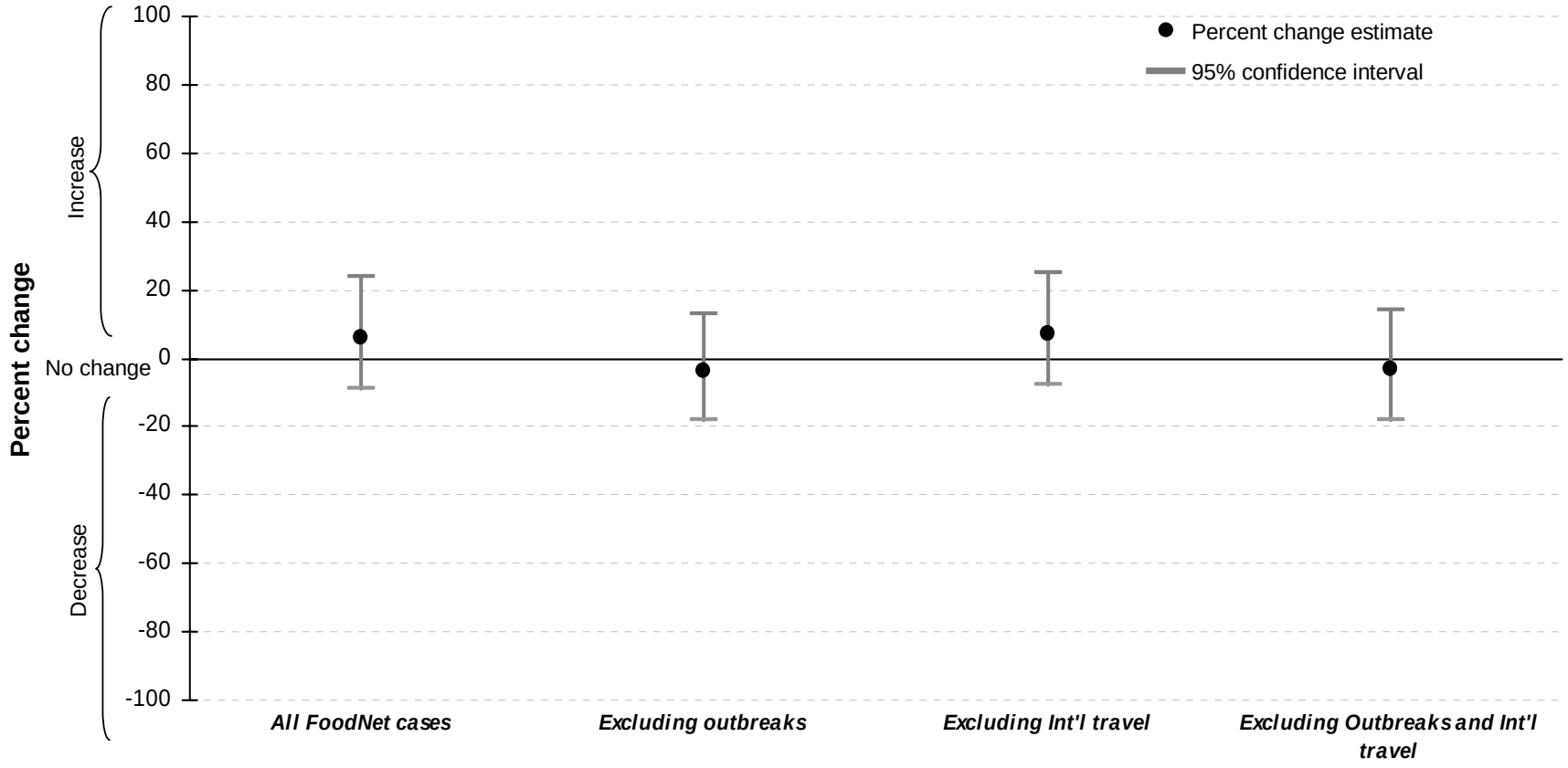


Figure 2. Percent change in the incidence of *STEC O157* infections in 2008 compared with the previous 3 years (2005-2007)



* Shiga toxin-producing *Escherichia coli*.

Table 12. Model output for predictions using the previous 3 years (2005-2007) as the comparison period – bacterial pathogens

ALL CASES

Isolate	Year	Relative Rate	Lower 95% CI	Upper 95% CI	Percent Change	Lower 95% CI	Upper 95% CI
CAMPYLOBACTER	2008	0.96	0.92	1.00	-4	-8	0
LISTERIA	2008	0.97	0.78	1.20	-3	-22	20
SALMONELLA	2008	1.05	1	1.10	5	0	10
SHIGELLA	2008	0.98	0.86	1.12	-2	-14	12
STEC O157	2008	1.06	0.91	1.24	6	-9	24
VIBRIO	2008	0.95	0.75	1.20	-5	-25	20
YERSINIA	2008	0.95	0.77	1.18	-5	-23	18

EXCLUDING OUTBREAK RELATED CASES

Isolate	Year	Relative Rate	Lower 95% CI	Upper 95% CI	Percent Change	Lower 95% CI	Upper 95% CI
CAMPYLOBACTER	2008	0.96	0.91	1.00	-4	-9	0
LISTERIA	2008	0.99	0.8	1.22	-1	-20	22
SALMONELLA	2008	1.05	1.01	1.11	5	1	11
SHIGELLA	2008	0.97	0.85	1.10	-3	-15	10
STEC O157	2008	0.96	0.82	1.13	-4	-18	13
VIBRIO	2008	0.96	0.76	1.22	-4	-24	22
YERSINIA	2008	0.96	0.77	1.18	-4	-23	18

EXCLUDING INTERNATIONAL TRAVEL RELATED CASES

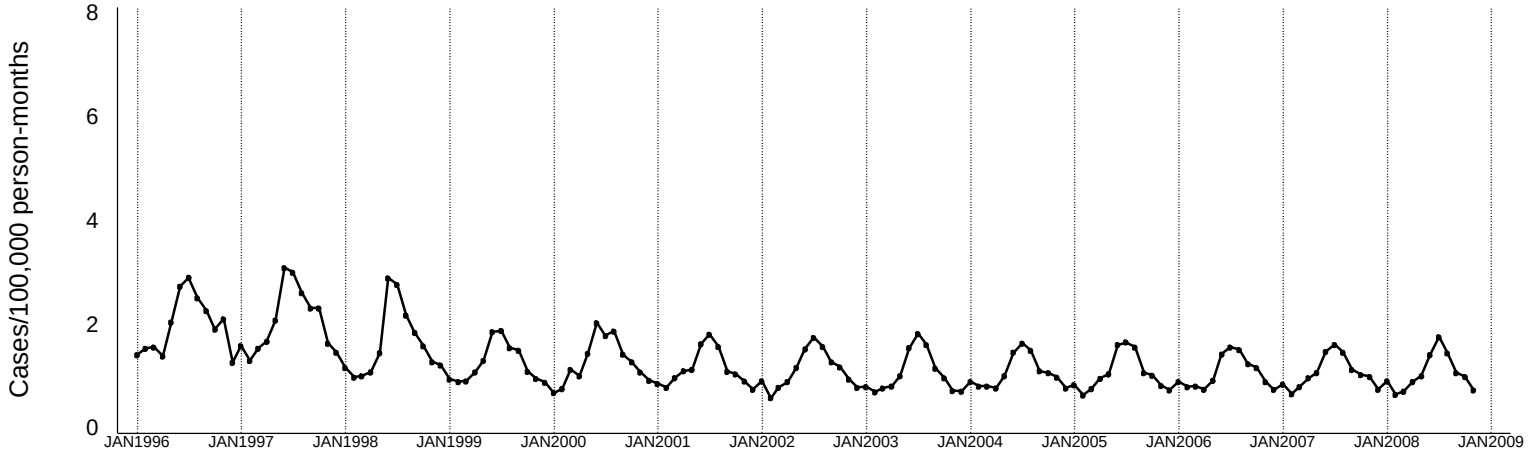
Isolate	Year	Relative Rate	Lower 95% CI	Upper 95% CI	Percent Change	Lower 95% CI	Upper 95% CI
CAMPYLOBACTER	2008	0.95	0.91	1.00	-5	-9	0
LISTERIA	2008	0.94	0.76	1.17	-6	-24	17
SALMONELLA	2008	1.06	1.01	1.12	6	1	12
SHIGELLA	2008	1.01	0.88	1.16	1	-12	16
E. COLI O157	2008	1.07	0.92	1.25	7	-8	25
VIBRIO	2008	0.93	0.73	1.19	-7	-27	19
YERSINIA	2008	0.92	0.74	1.15	-8	-26	15

EXCLUDING BOTH OUTBREAK RELATED AND INT'L TRAVEL RELATED CASES

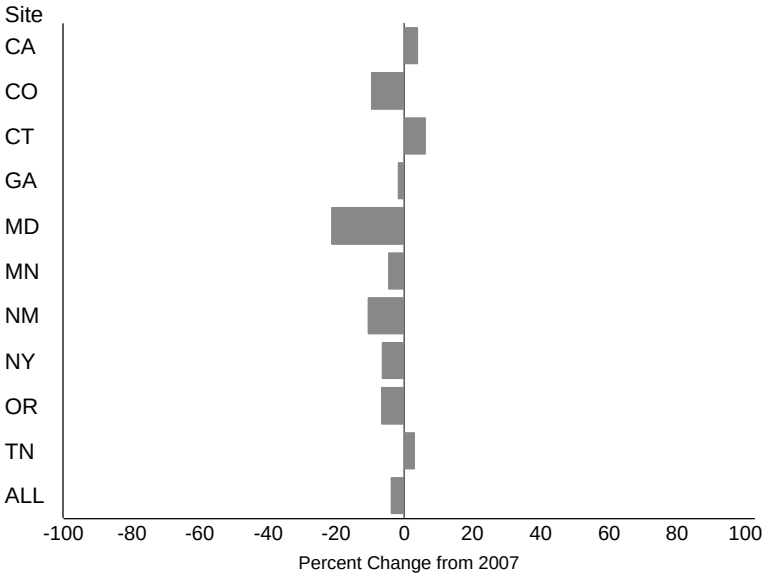
Isolate	Year	Relative Rate	Lower 95% CI	Upper 95% CI	Percent Change	Lower 95% CI	Upper 95% CI
CAMPYLOBACTER	2008	0.95	0.91	1.00	-5	-9	0
LISTERIA	2008	0.96	0.78	1.20	-4	-22	20
SALMONELLA	2008	1.07	1.02	1.13	7	2	13
SHIGELLA	2008	1	0.87	1.14	0	-13	14
STEC O157	2008	0.97	0.82	1.14	-3	-18	14
VIBRIO	2008	0.95	0.74	1.21	-5	-26	21
YERSINIA	2008	0.93	0.75	1.15	-7	-25	15

Campylobacter

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site



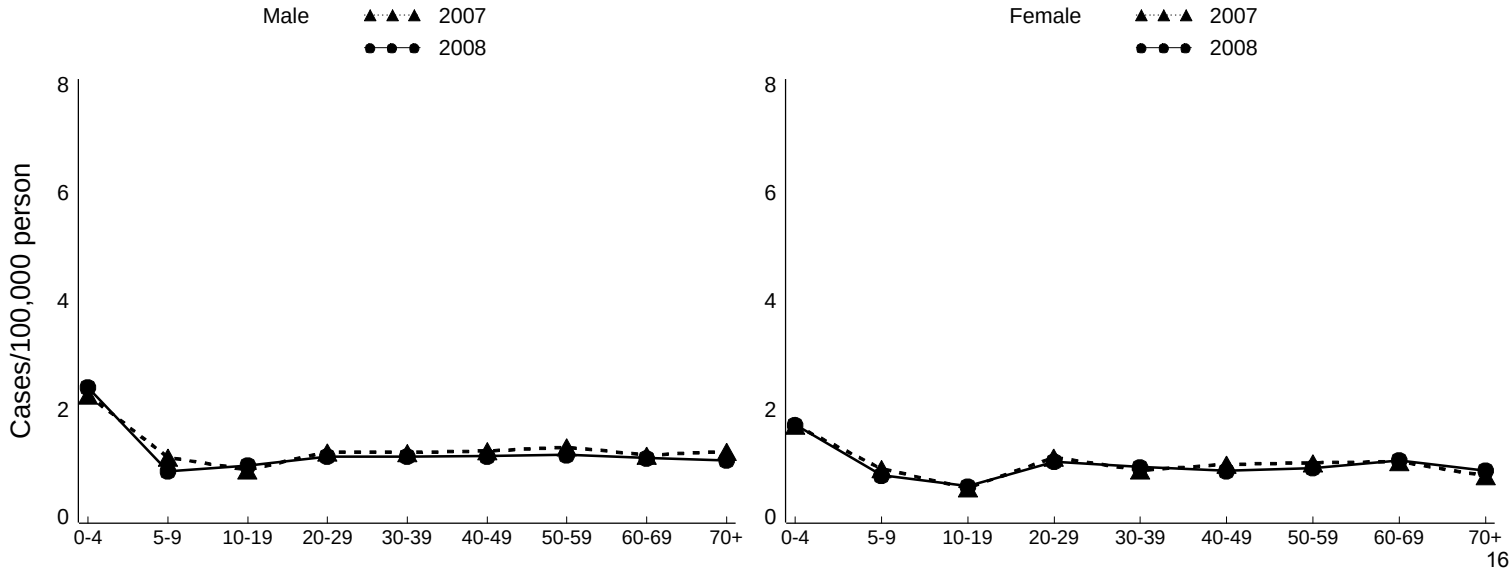
* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	905	27.86	872	26.84	839	26.07
CO	355	13.14	393	14.55	427	16.42
CT	492	14.05	464	13.25	507	14.53
GA	639	6.695	650	6.810	579	6.337
MD	308	5.482	391	6.959	371	6.654
MN	829	15.95	869	16.72	853	16.66
NM	296	15.03	331	16.80	335	17.33
NY	448	10.50	479	11.22	473	11.21
OR	619	16.52	663	17.69	605	16.60
TN	429	6.968	417	6.773	407	6.803
ALL	5320	11.58	5529	12.03	5396	11.96

*year 2003-2007 except for NM (2004-2007)

^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex

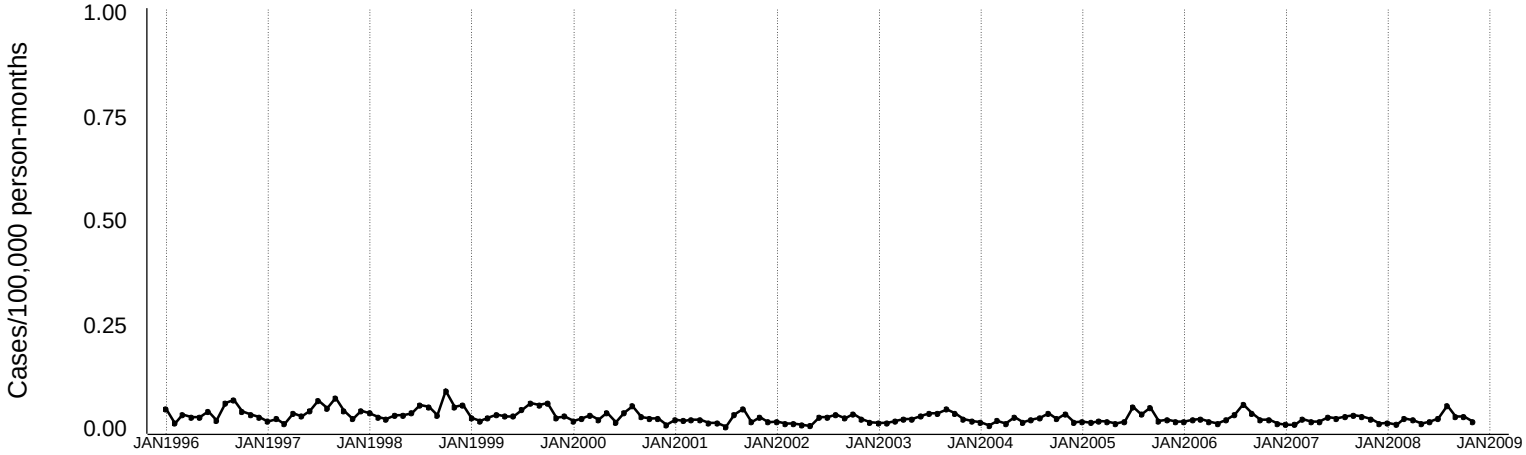


Data source: Preliminary FoodNet data, subject to change, not for public distribution.

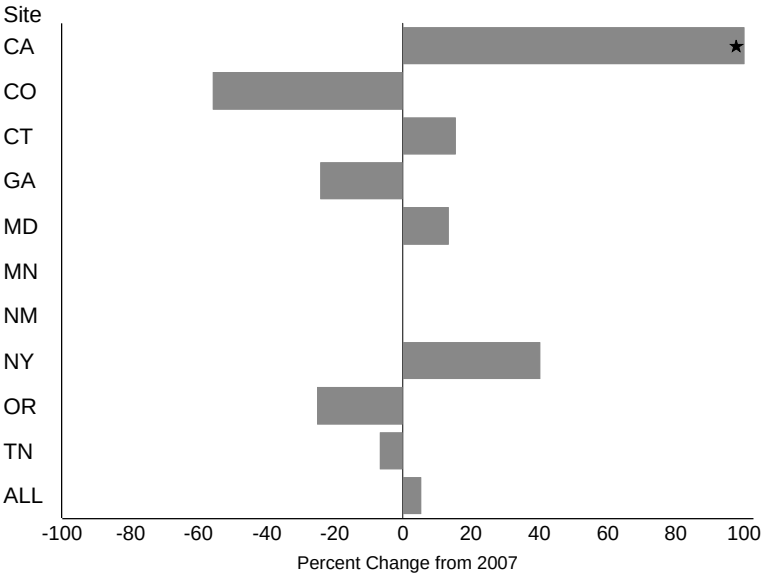
Report date: 06-January-2009

Listeria

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

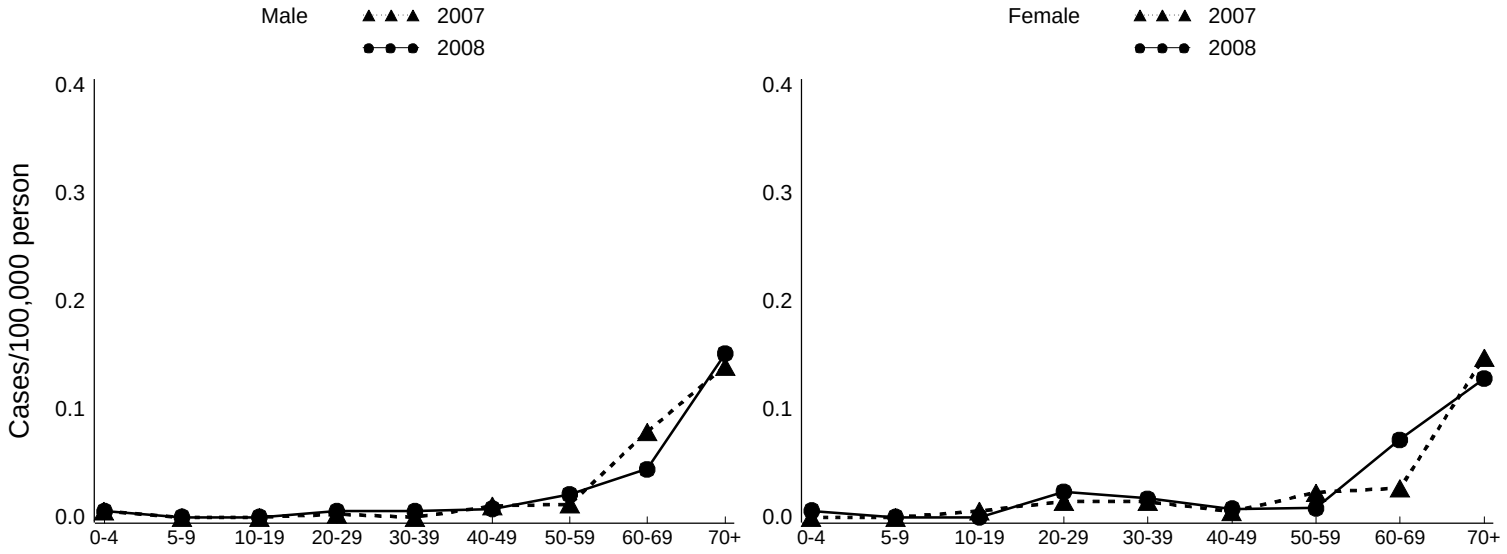


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	20	0.616	7	0.215	11	0.330
CO	4	0.148	9	0.333	6	0.230
CT	15	0.428	13	0.371	18	0.504
GA	22	0.230	29	0.304	24	0.259
MD	17	0.303	15	0.267	21	0.370
MN	6	0.115	6	0.115	7	0.140
NM	4	0.203	4	0.203	4	0.180
NY	14	0.328	10	0.234	15	0.345
OR	6	0.160	8	0.213	8	0.219
TN	14	0.227	15	0.244	13	0.217
ALL	122	0.265	116	0.252	125	0.279

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

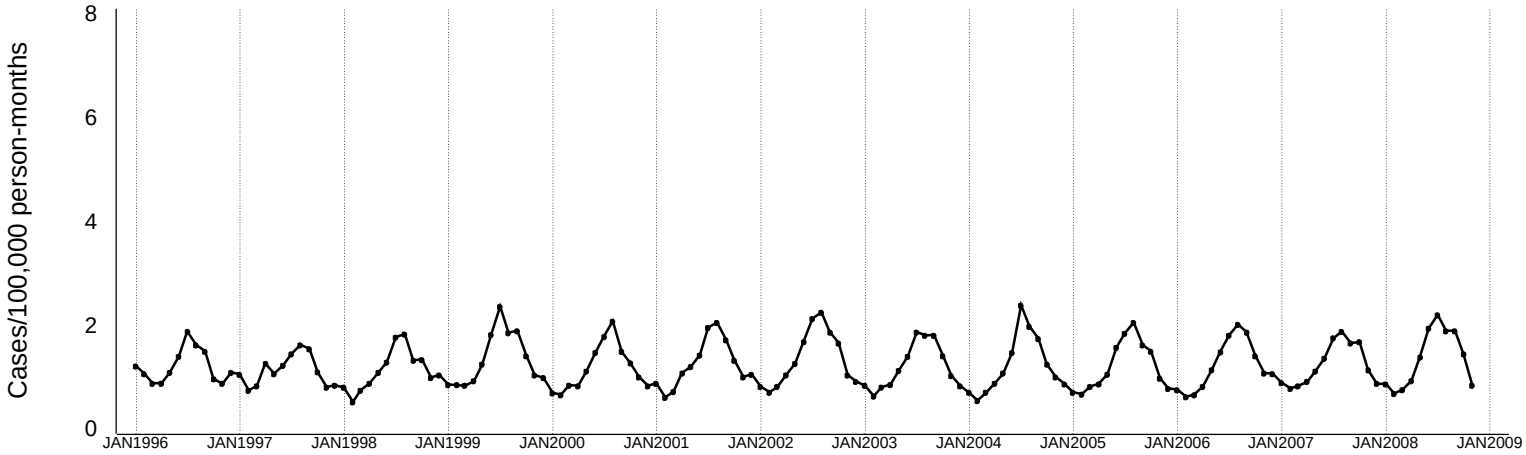
Calendar year through November: Rates for 2007 and 2008 by age group and sex



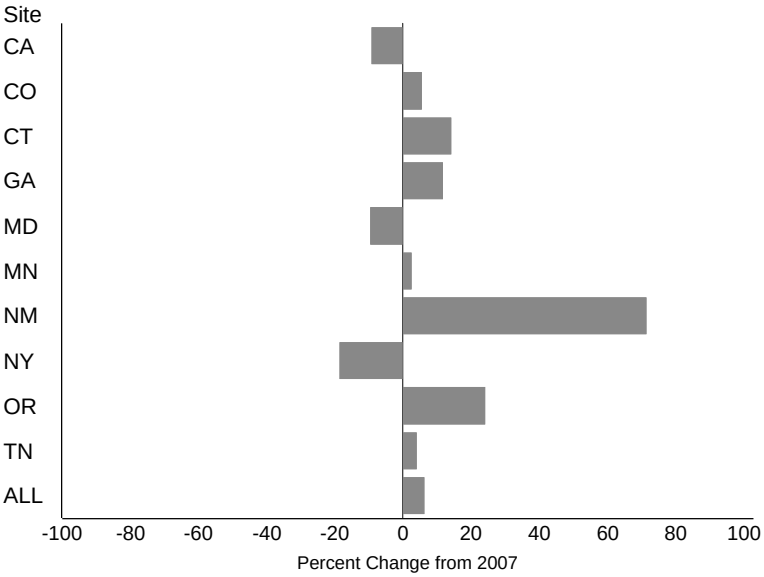
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

Salmonella, all serotypes

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

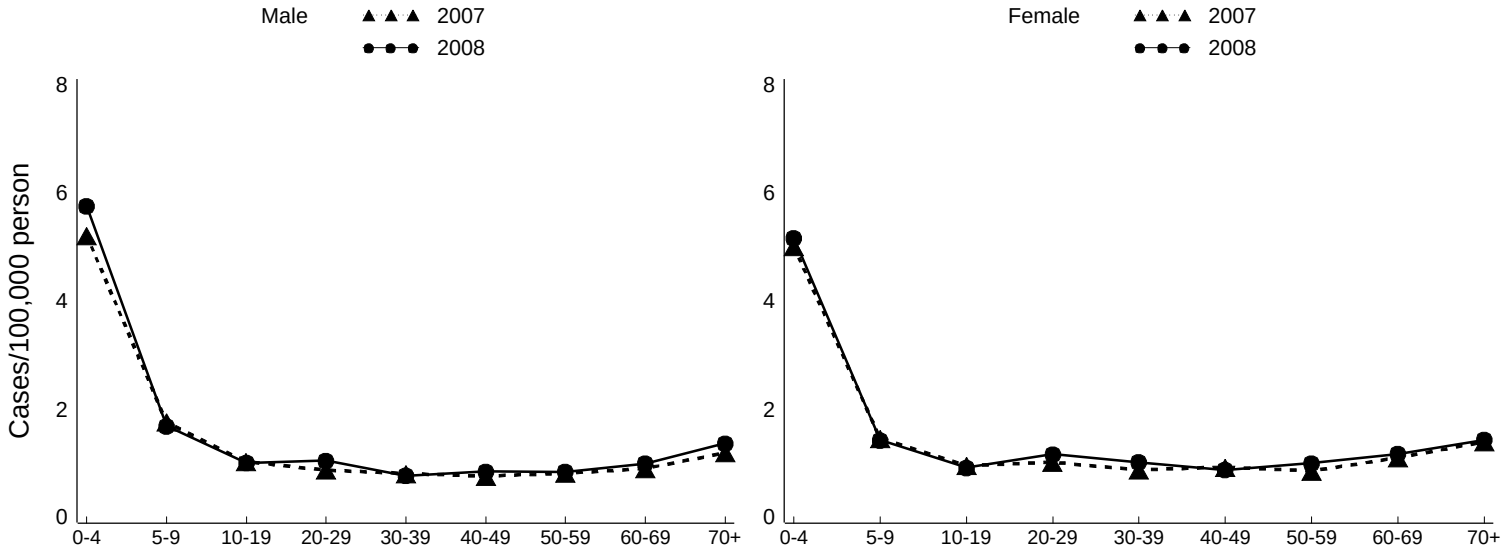


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	410	12.6	451	13.9	451	14.0
CO	314	11.6	298	11.0	292	11.2
CT	465	13.3	408	11.6	425	12.2
GA	2133	22.3	1913	20.0	1834	20.1
MD	749	13.3	828	14.7	763	13.7
MN	690	13.3	674	13.0	605	11.8
NM	464	23.6	271	13.8	256	13.2
NY	400	9.37	491	11.5	443	10.5
OR	372	9.93	300	8.01	348	9.56
TN	823	13.4	792	12.9	753	12.6
ALL	6820	14.8	6426	14.0	6169	13.7

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

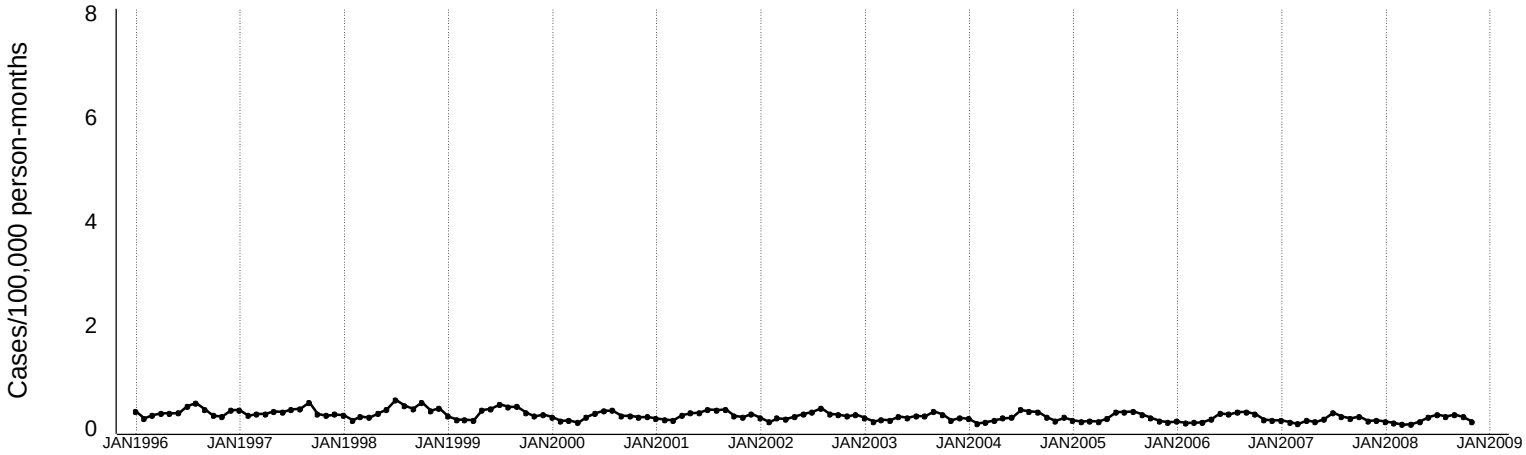
Calendar year through November: Rates for 2007 and 2008 by age group and sex



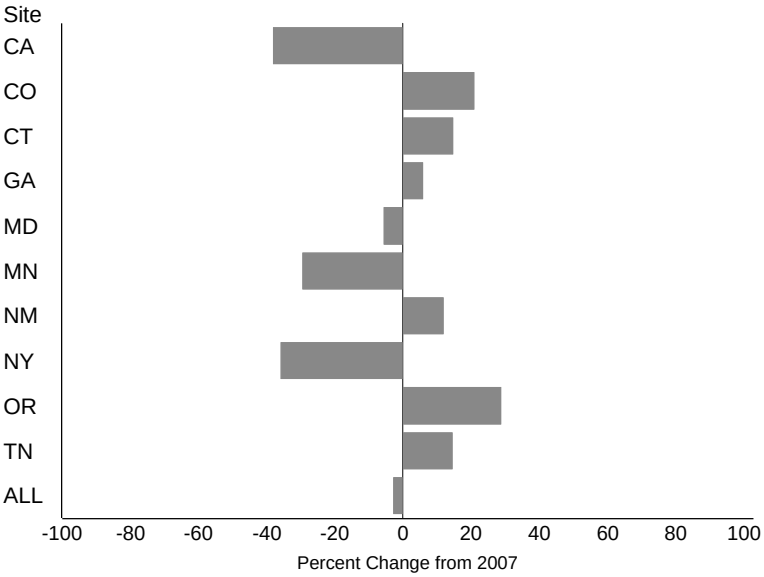
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

Salmonella Typhimurium

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

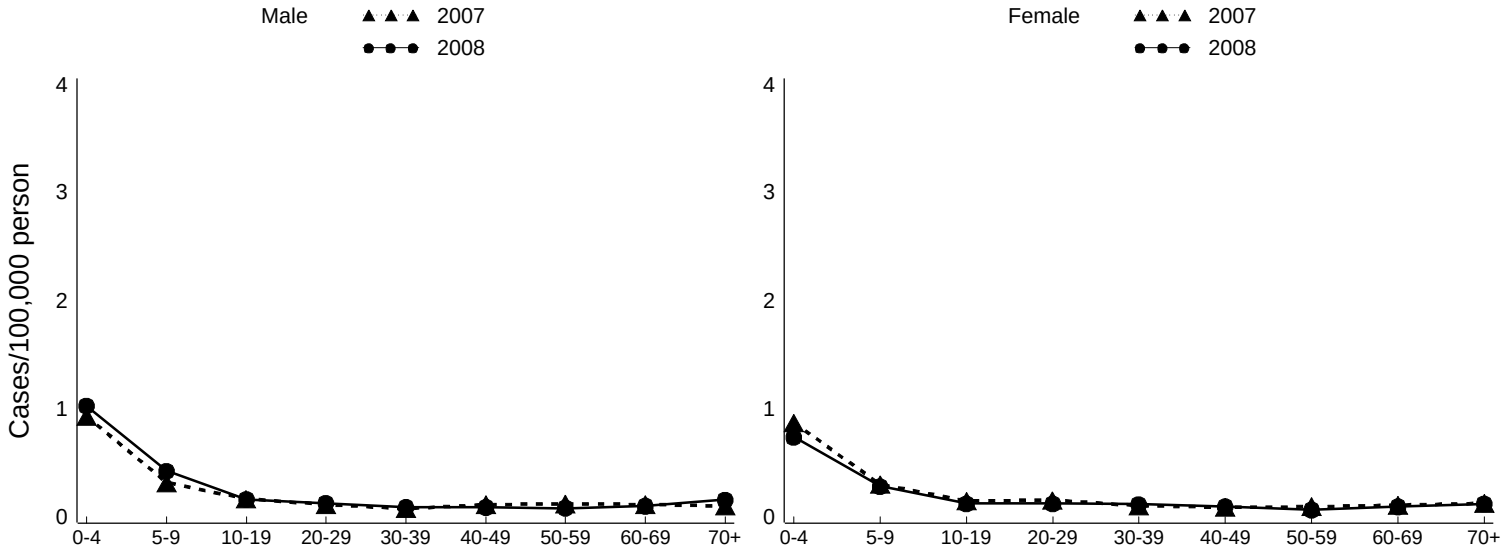


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	36	1.11	58	1.79	72	2.23
CO	64	2.37	53	1.96	66	2.55
CT	79	2.26	69	1.97	82	2.34
GA	254	2.66	240	2.51	242	2.65
MD	101	1.80	107	1.90	121	2.18
MN	101	1.94	143	2.75	136	2.65
NM	38	1.93	34	1.73	44	2.28
NY	45	1.05	70	1.64	90	2.14
OR	63	1.68	49	1.31	71	1.95
TN	135	2.19	118	1.92	138	2.31
ALL	916	1.99	941	2.05	1062	2.37

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

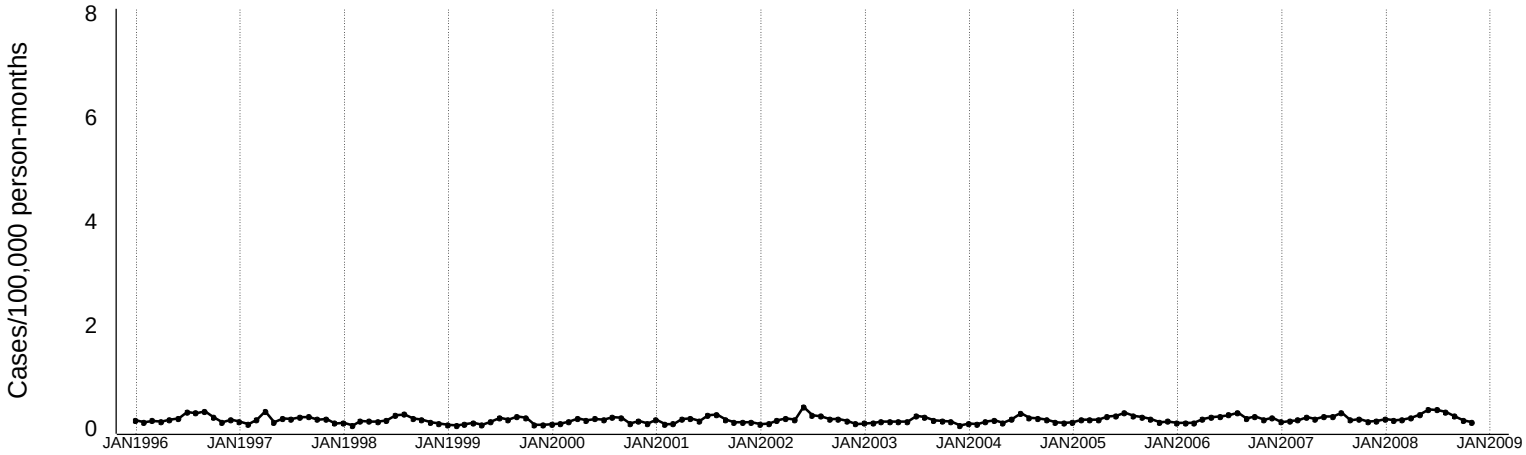
Calendar year through November: Rates for 2007 and 2008 by age group and sex



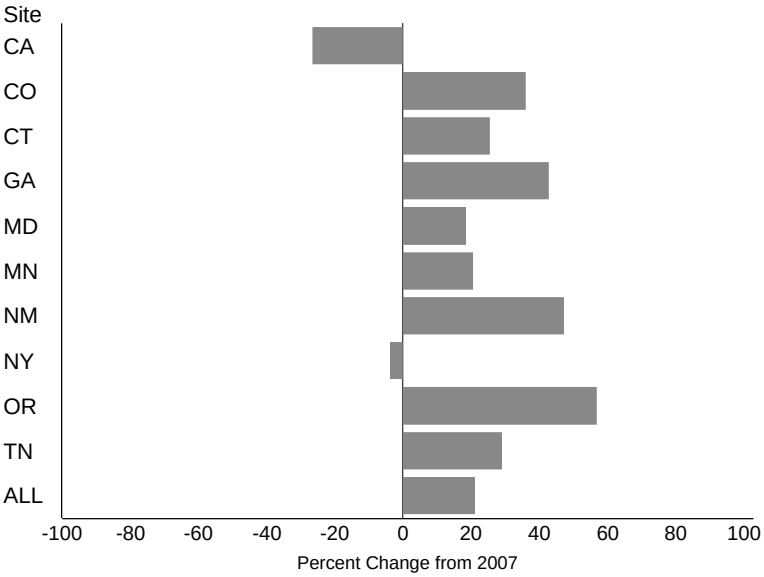
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

Salmonella Enteritidis

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

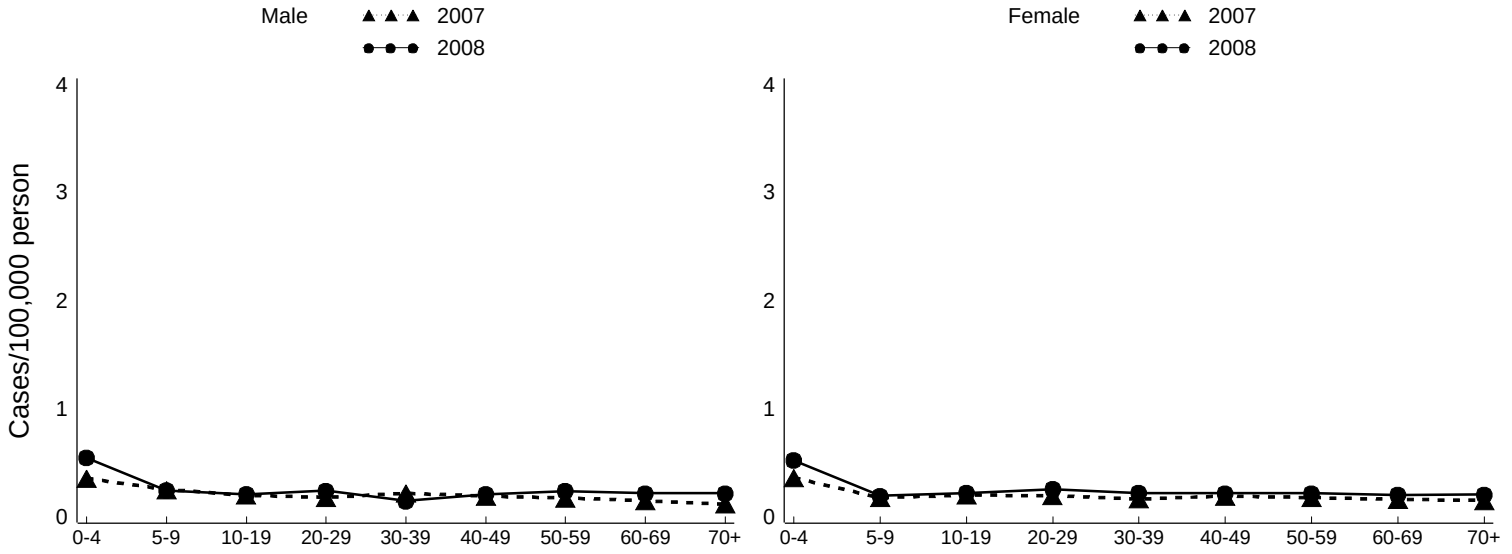


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	64	1.970	87	2.678	84	2.617
CO	76	2.813	56	2.073	52	1.994
CT	129	3.683	103	2.941	99	2.846
GA	228	2.389	160	1.676	124	1.346
MD	258	4.592	218	3.880	209	3.760
MN	159	3.059	132	2.540	122	2.378
NM	25	1.269	17	0.863	19	0.995
NY	105	2.461	109	2.554	77	1.828
OR	72	1.921	46	1.227	60	1.659
TN	107	1.738	83	1.348	78	1.306
ALL	1223	2.661	1011	2.200	926	2.065

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

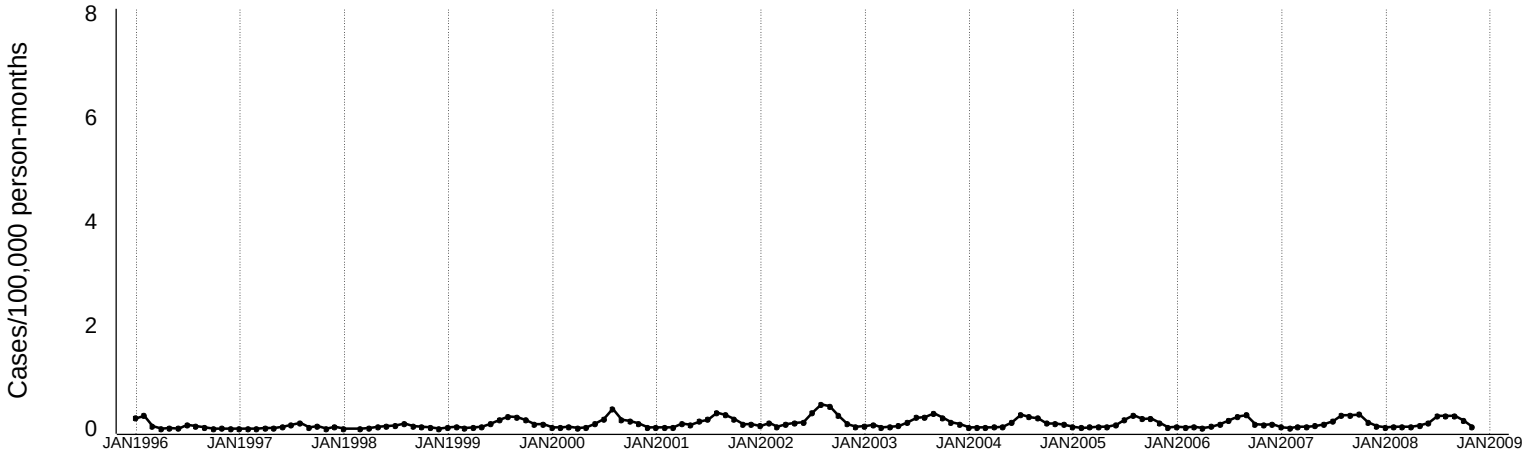
Calendar year through November: Rates for 2007 and 2008 by age group and sex



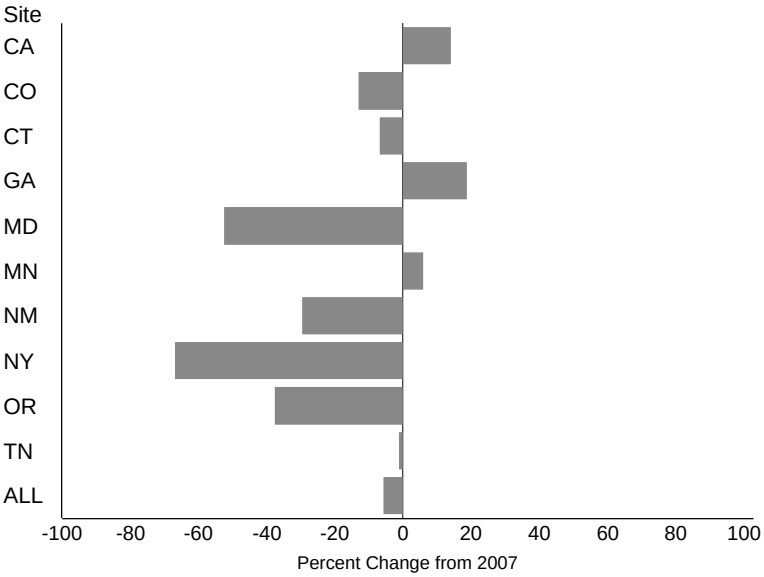
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

Salmonella Newport

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

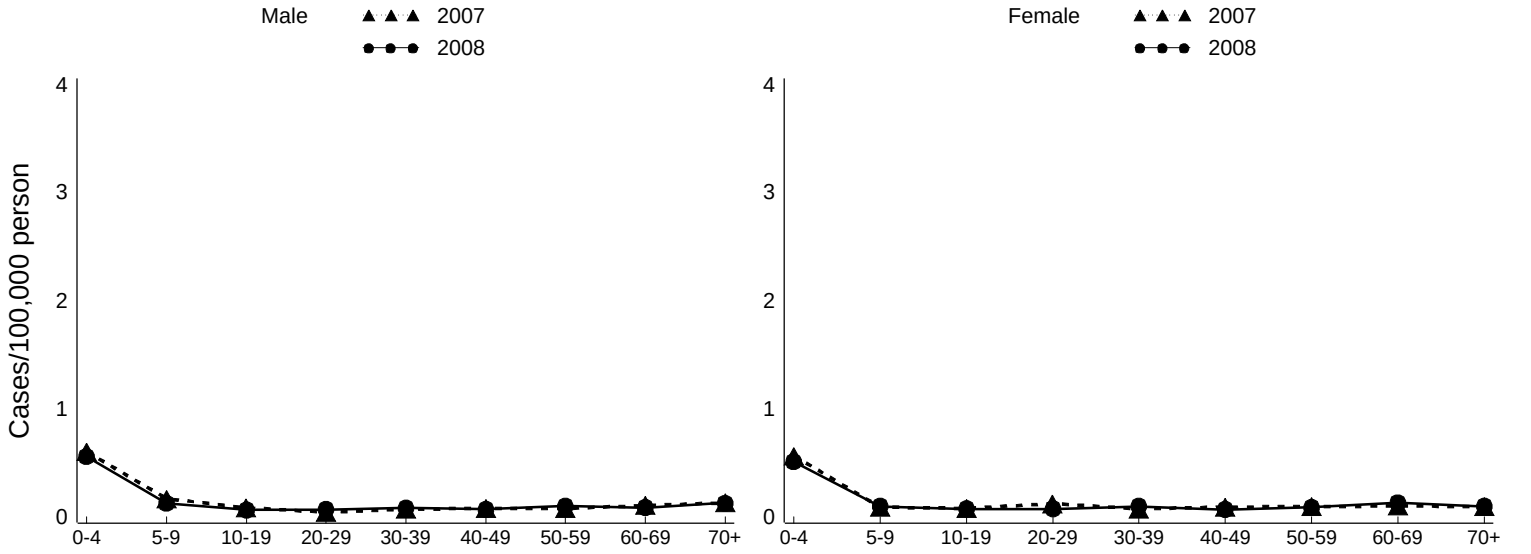


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	33	1.016	29	0.893	25	0.783
CO	27	0.999	31	1.148	23	0.872
CT	28	0.799	30	0.857	26	0.751
GA	307	3.216	259	2.714	265	2.915
MD	31	0.552	65	1.157	50	0.905
MN	37	0.712	35	0.673	42	0.824
NM	29	1.472	41	2.081	28	1.420
NY	15	0.352	45	1.055	35	0.821
OR	10	0.267	16	0.427	19	0.535
TN	92	1.494	93	1.511	72	1.193
ALL	609	1.325	644	1.401	585	1.304

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex



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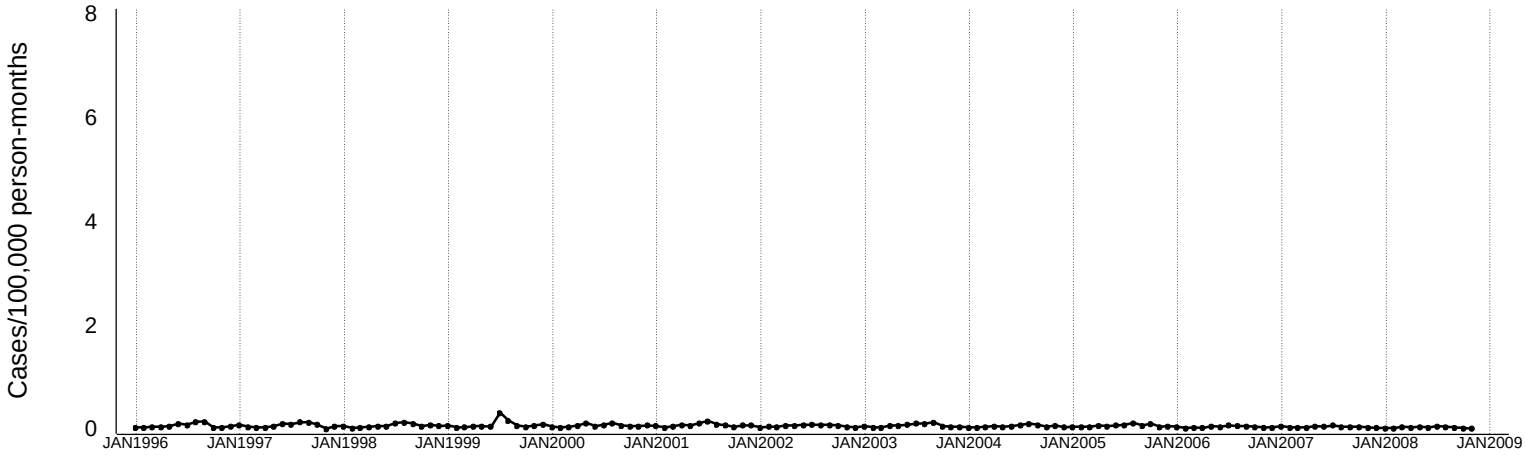
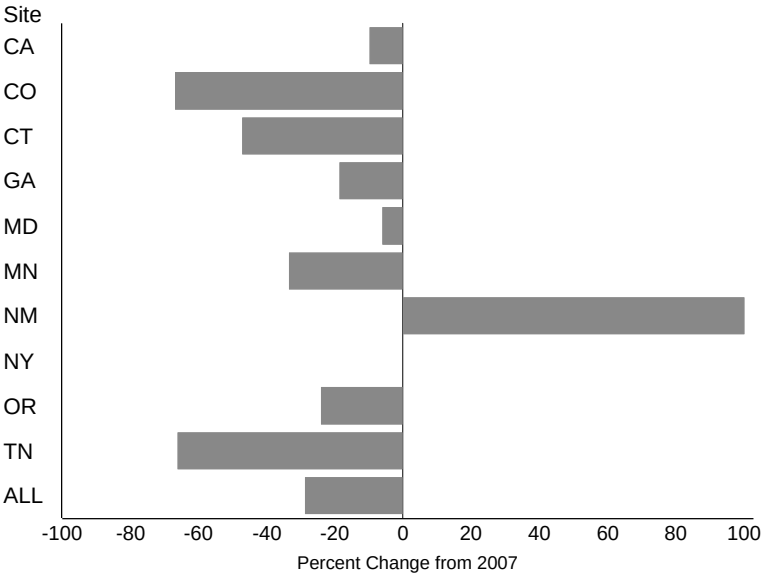
Salmonella Heidelberg

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

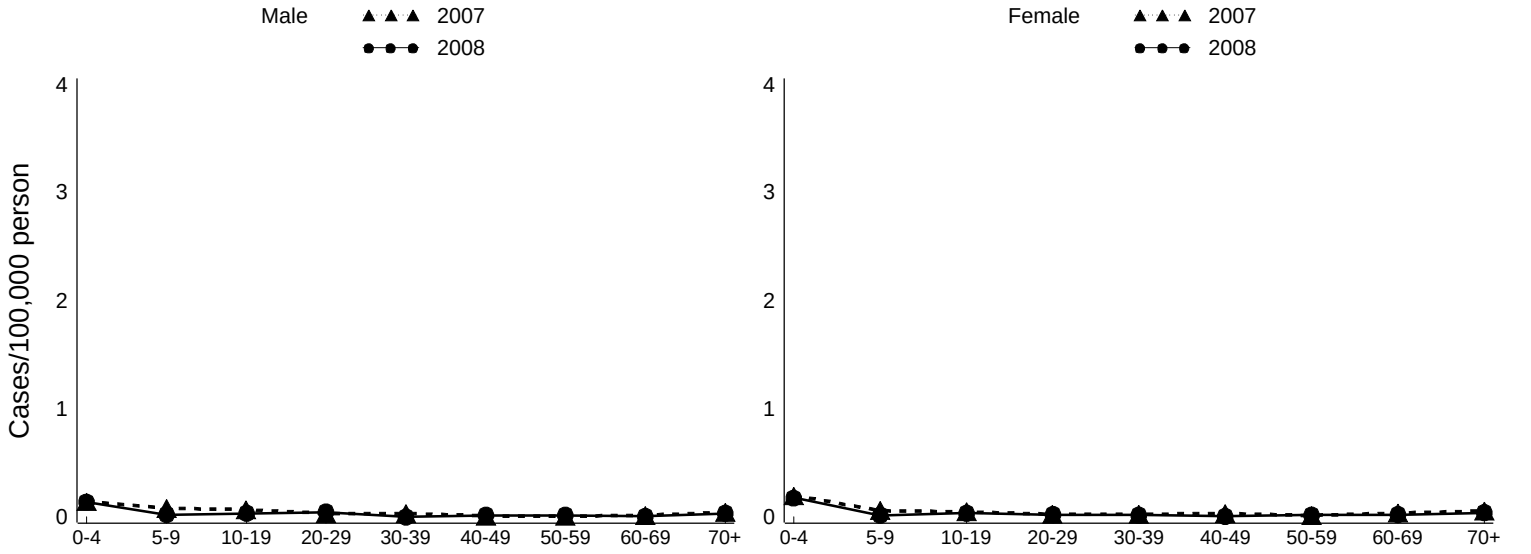


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	28	0.862	31	0.954	38	1.182
CO	6	0.222	18	0.666	15	0.569
CT	9	0.257	17	0.485	19	0.556
GA	31	0.325	38	0.398	60	0.661
MD	16	0.285	17	0.303	23	0.421
MN	10	0.192	15	0.289	30	0.588
NM	10	0.508	5	0.254	5	0.272
NY	24	0.562	24	0.562	32	0.768
OR	19	0.507	25	0.667	28	0.757
TN	16	0.260	47	0.763	35	0.587
ALL	169	0.368	237	0.516	286	0.643

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex



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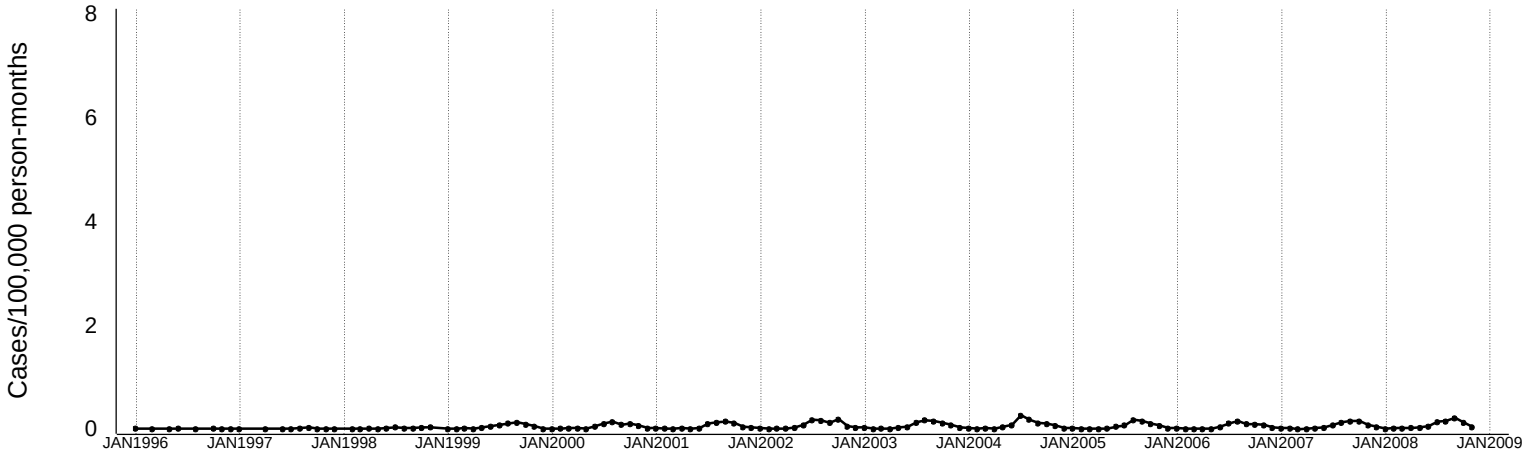
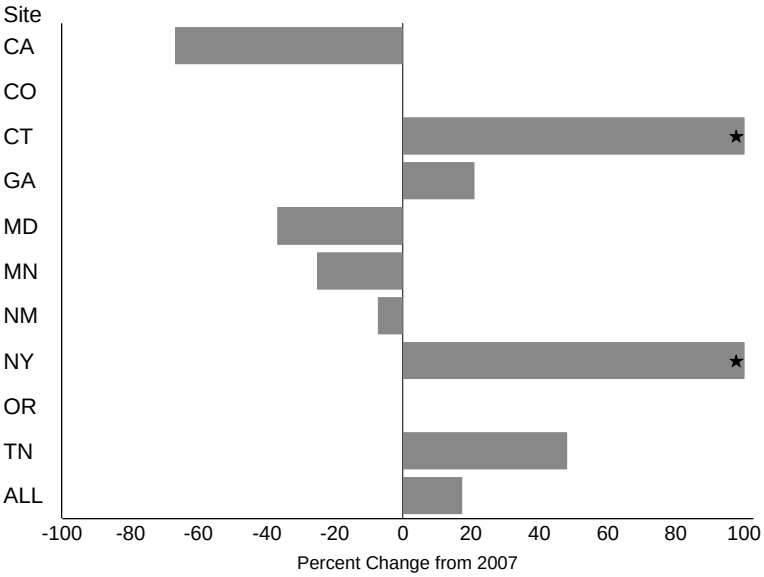
Salmonella Javiana

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

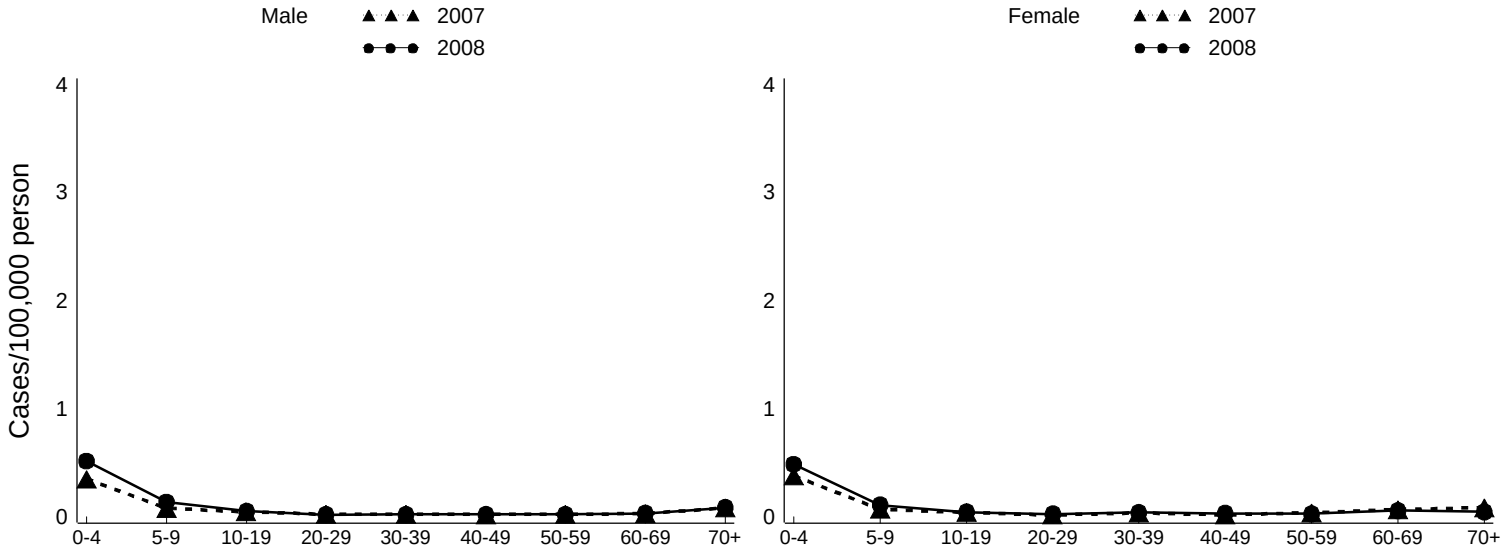


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	1	0.031	3	0.092	5	0.156
CO	6	0.222	6	0.222	5	0.192
CT	11	0.314	2	0.057	5	0.155
GA	273	2.860	226	2.368	221	2.429
MD	19	0.338	30	0.534	37	0.672
MN	6	0.115	8	0.154	6	0.125
NM	26	1.320	28	1.421	22	1.110
NY	7	0.164	1	0.023	6	0.143
OR	1	0.027	1	0.027	3	0.082
TN	37	0.601	25	0.406	30	0.497
ALL	387	0.842	330	0.718	341	0.757

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex



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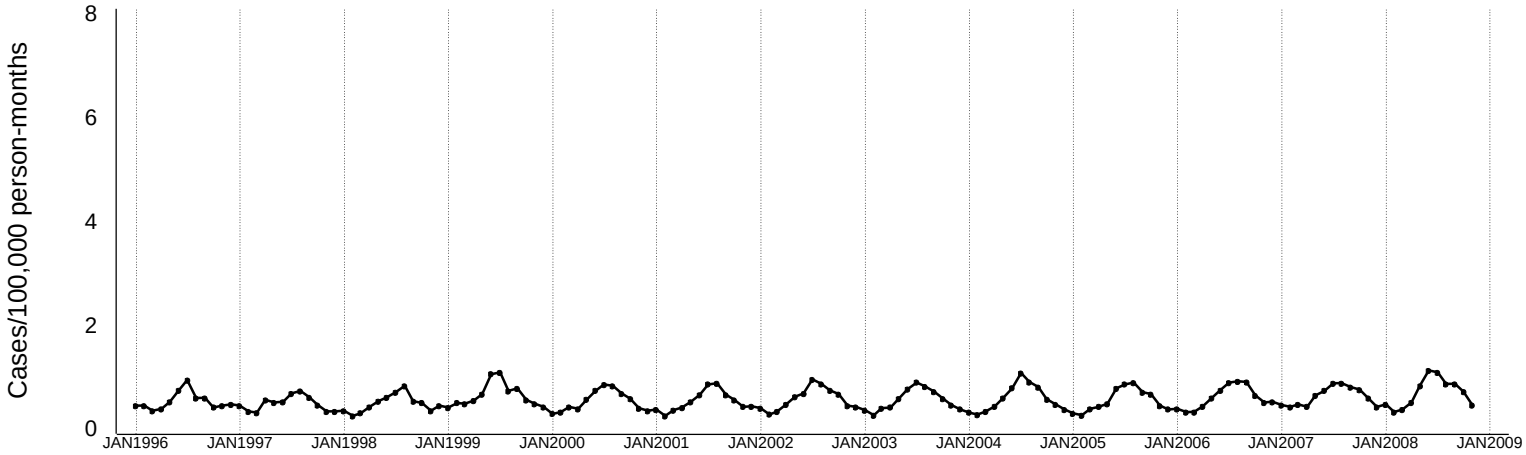
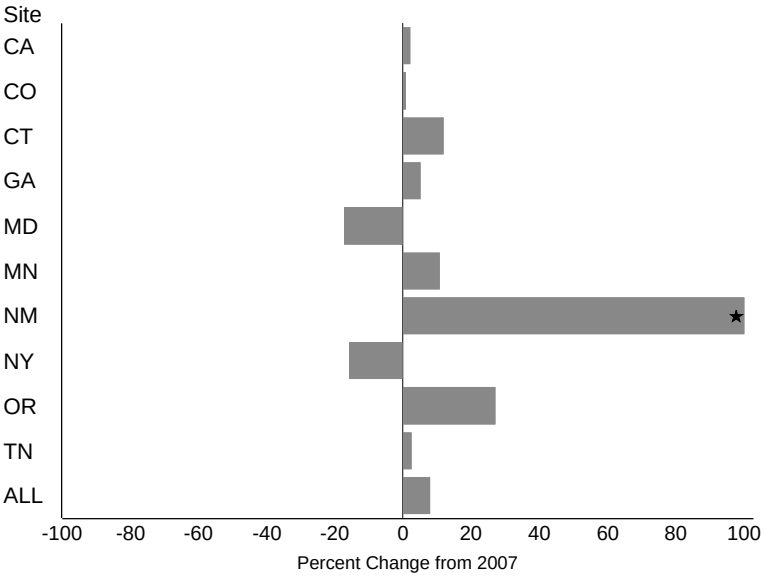
Salmonella, all others

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

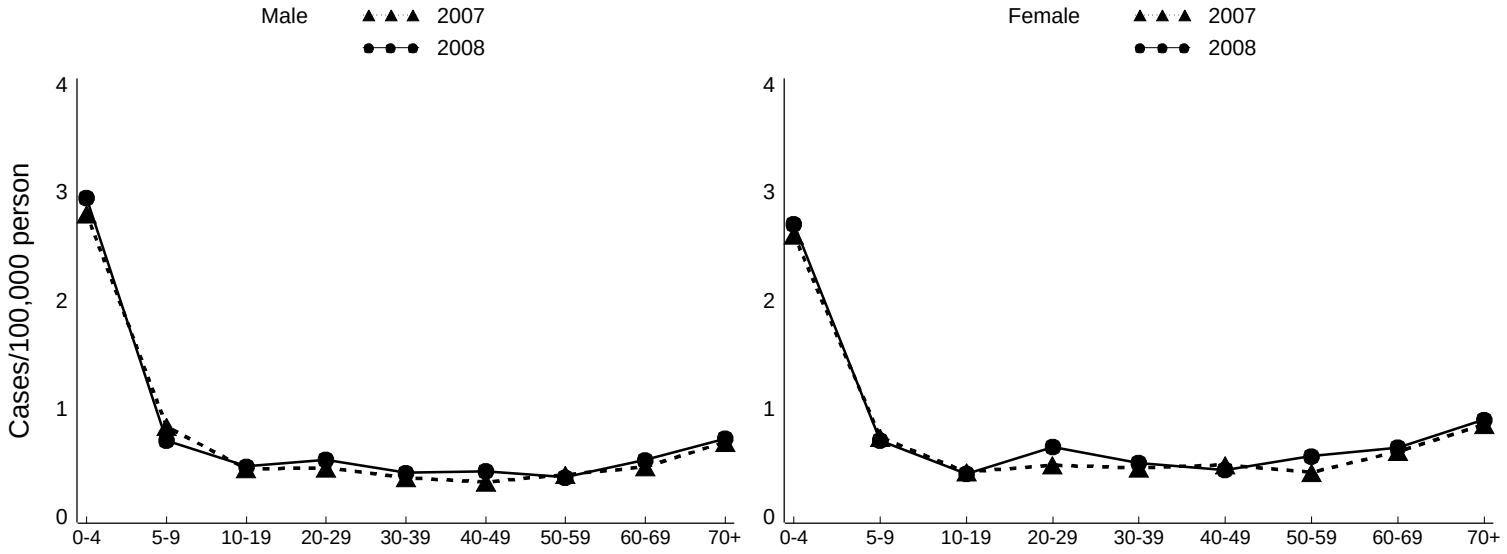


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	248	7.63	243	7.48	227	7.04
CO	135	5.00	134	4.96	131	5.02
CT	209	5.97	187	5.34	193	5.52
GA	1040	10.9	990	10.4	921	10.1
MD	324	5.77	391	6.96	321	5.77
MN	377	7.25	341	6.56	269	5.24
NM	336	17.1	146	7.41	138	7.16
NY	204	4.78	242	5.67	203	4.80
OR	207	5.52	163	4.35	167	4.58
TN	436	7.08	426	6.92	399	6.66
ALL	3516	7.65	3263	7.10	2969	6.60

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

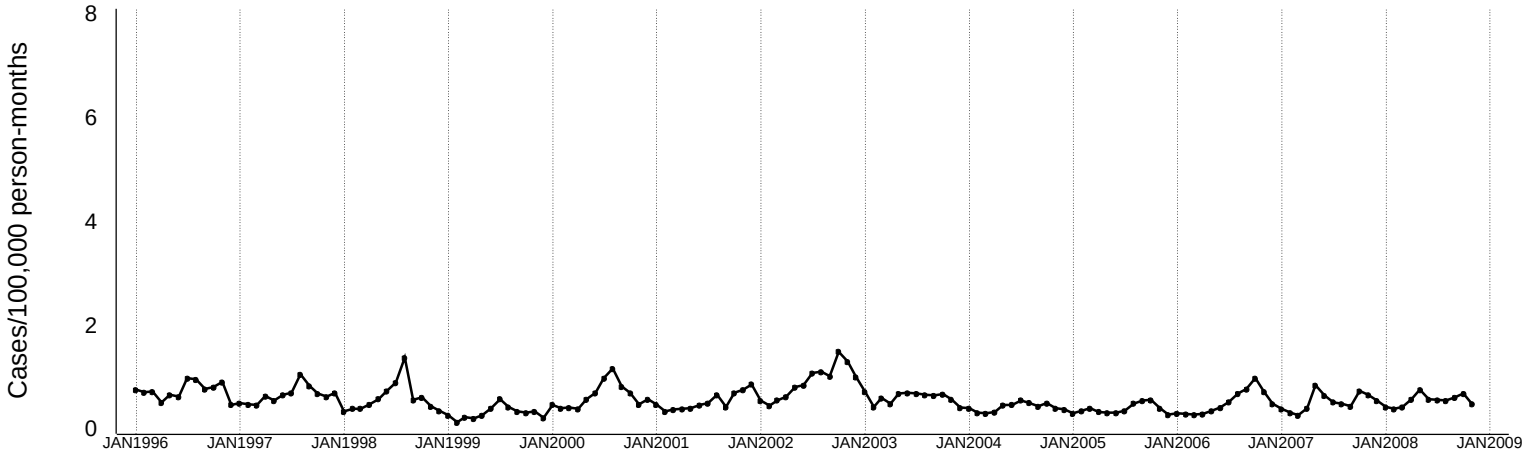
Calendar year through November: Rates for 2007 and 2008 by age group and sex



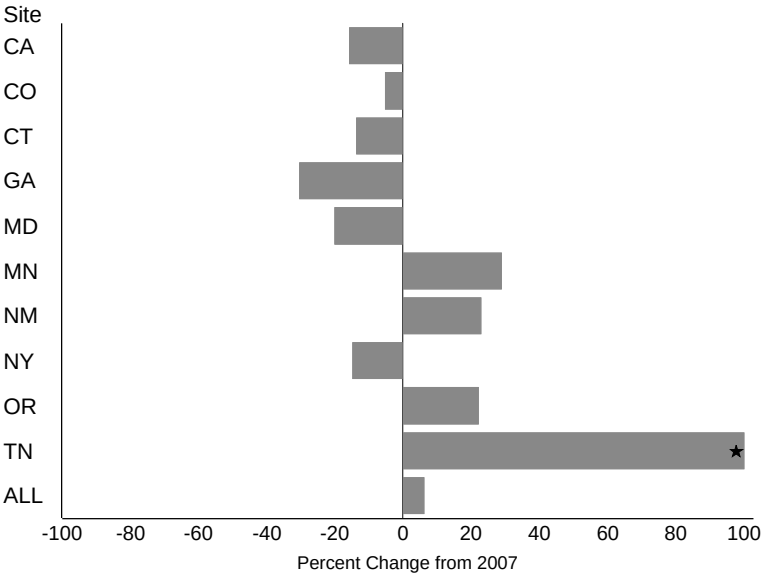
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

Shigella, all species

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

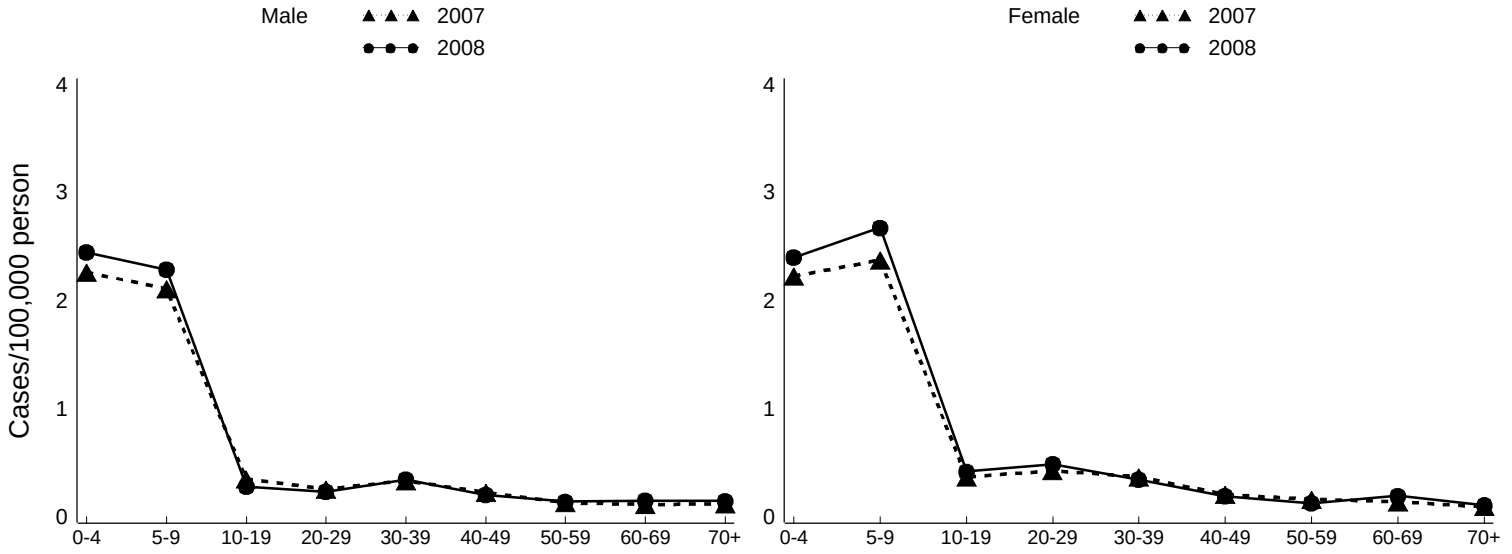


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	145	4.46	172	5.29	228	7.09
CO	73	2.70	77	2.85	132	5.09
CT	38	1.08	44	1.26	58	1.67
GA	1044	10.9	1499	15.7	1009	11.0
MD	84	1.50	105	1.87	180	3.24
MN	295	5.68	229	4.41	142	2.76
NM	124	6.29	101	5.13	133	6.88
NY	29	0.68	34	0.80	111	2.66
OR	72	1.92	59	1.57	80	2.20
TN	872	14.2	297	4.82	369	6.19
ALL	2776	6.04	2617	5.69	2442	5.44

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

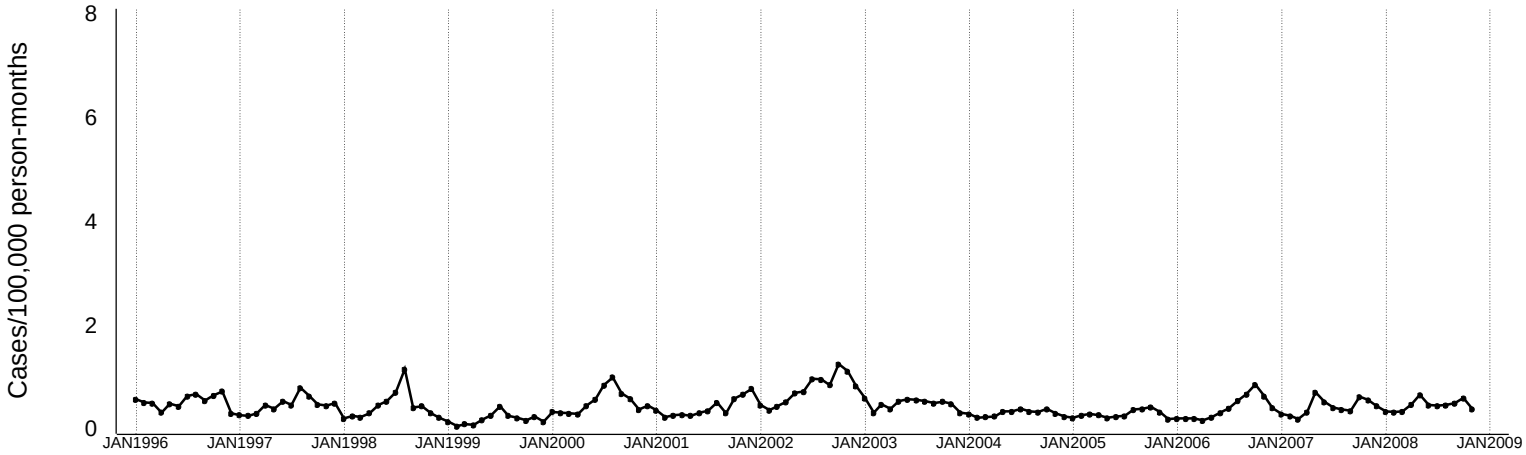
Calendar year through November: Rates for 2007 and 2008 by age group and sex



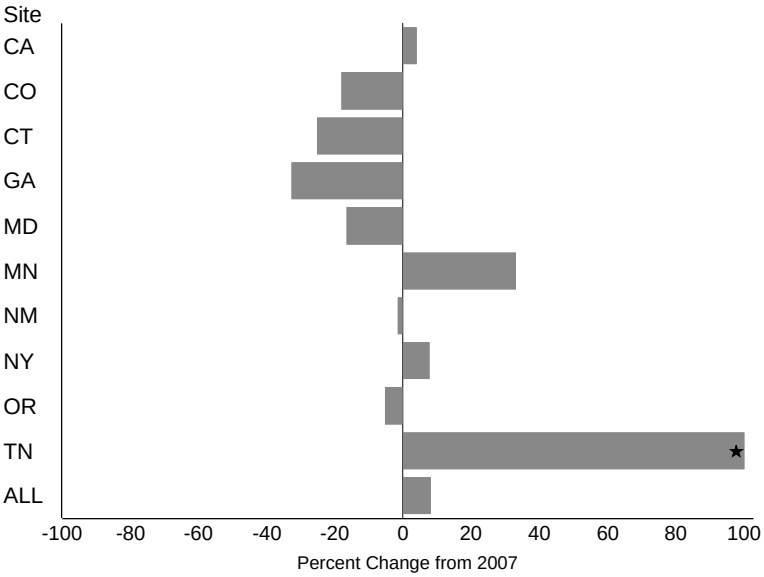
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

Shigella sonnei

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

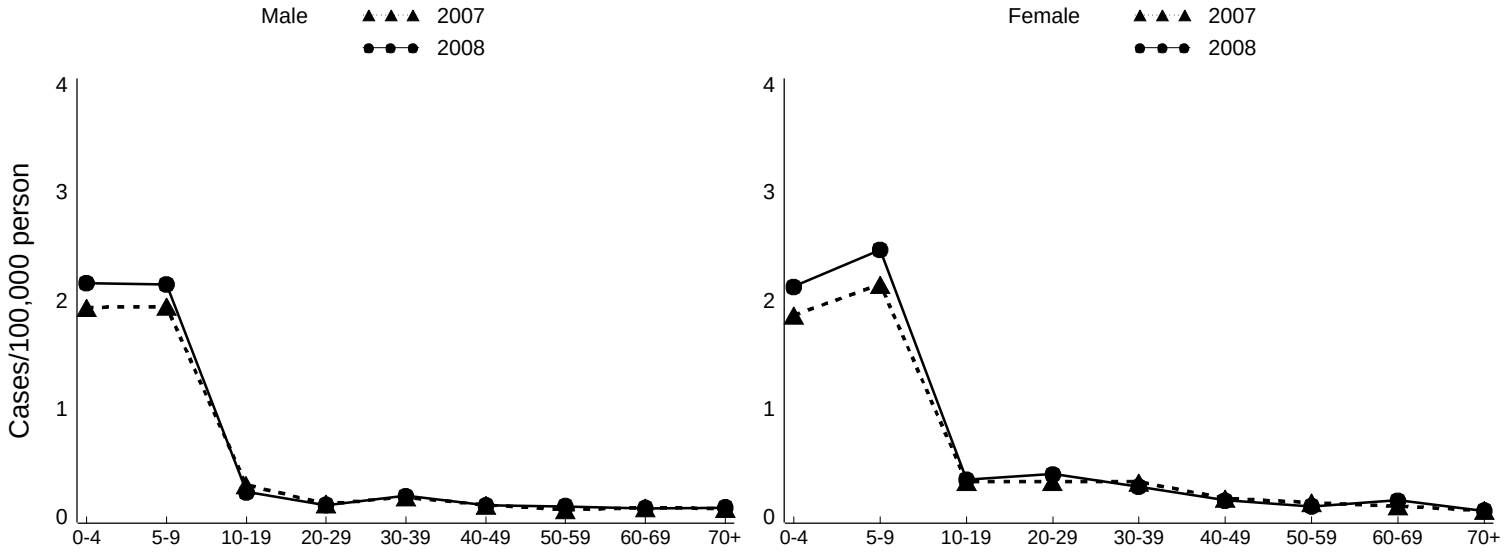


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	81	2.493	78	2.401	120	3.720
CO	46	1.703	56	2.073	95	3.675
CT	21	0.600	28	0.799	36	1.026
GA	880	9.220	1305	13.67	848	9.221
MD	61	1.086	73	1.299	133	2.401
MN	270	5.195	203	3.906	115	2.237
NM	72	3.655	73	3.706	90	4.642
NY	14	0.328	13	0.305	96	2.313
OR	37	0.987	39	1.041	53	1.467
TN	822	13.35	265	4.304	324	5.431
ALL	2304	5.014	2133	4.642	1910	4.261

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

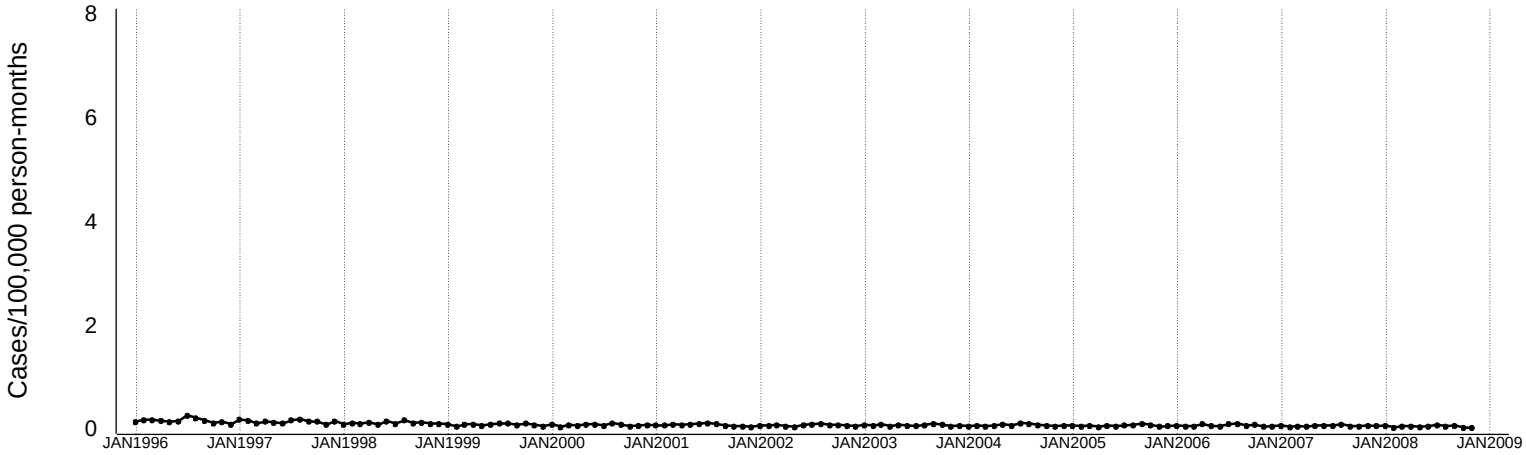
Calendar year through November: Rates for 2007 and 2008 by age group and sex



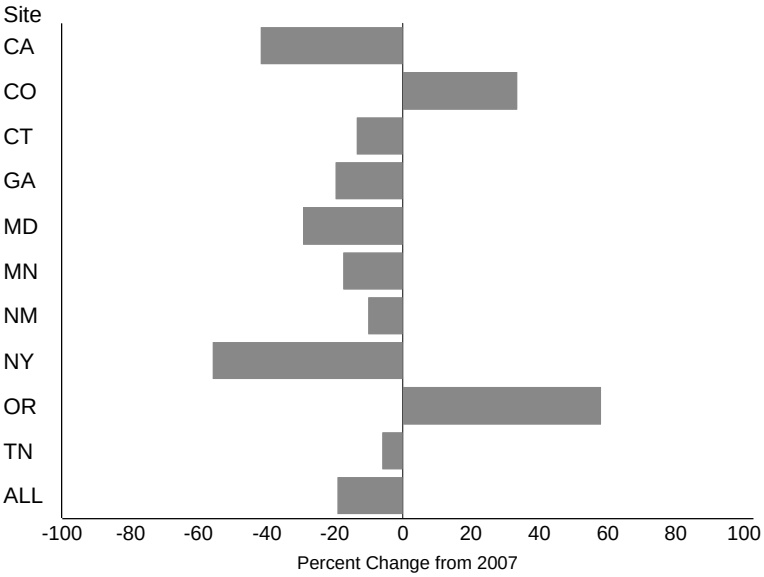
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

Shigella flexneri

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

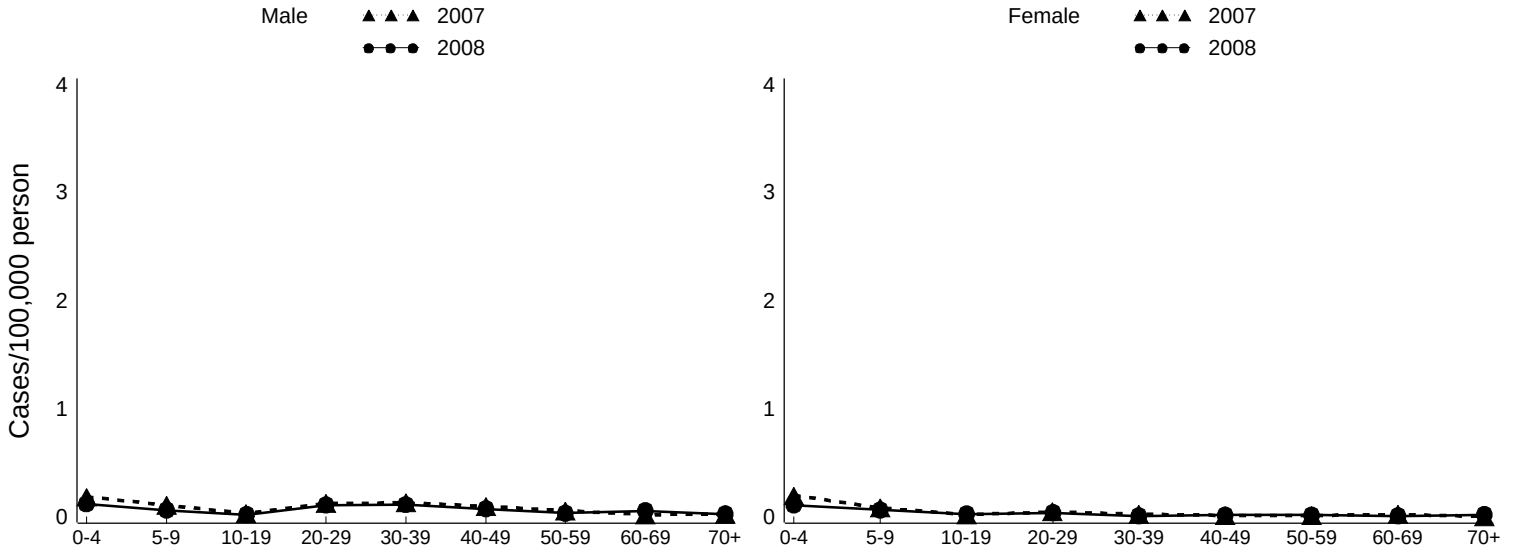


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	52	1.601	89	2.739	87	2.711
CO	24	0.888	18	0.666	31	1.179
CT	13	0.371	15	0.428	20	0.573
GA	70	0.733	87	0.911	76	0.832
MD	17	0.303	24	0.427	39	0.705
MN	19	0.366	23	0.443	23	0.445
NM	18	0.914	20	1.015	35	1.820
NY	8	0.187	18	0.422	12	0.284
OR	30	0.801	19	0.507	25	0.678
TN	16	0.260	17	0.276	15	0.256
ALL	267	0.581	330	0.718	363	0.800

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex



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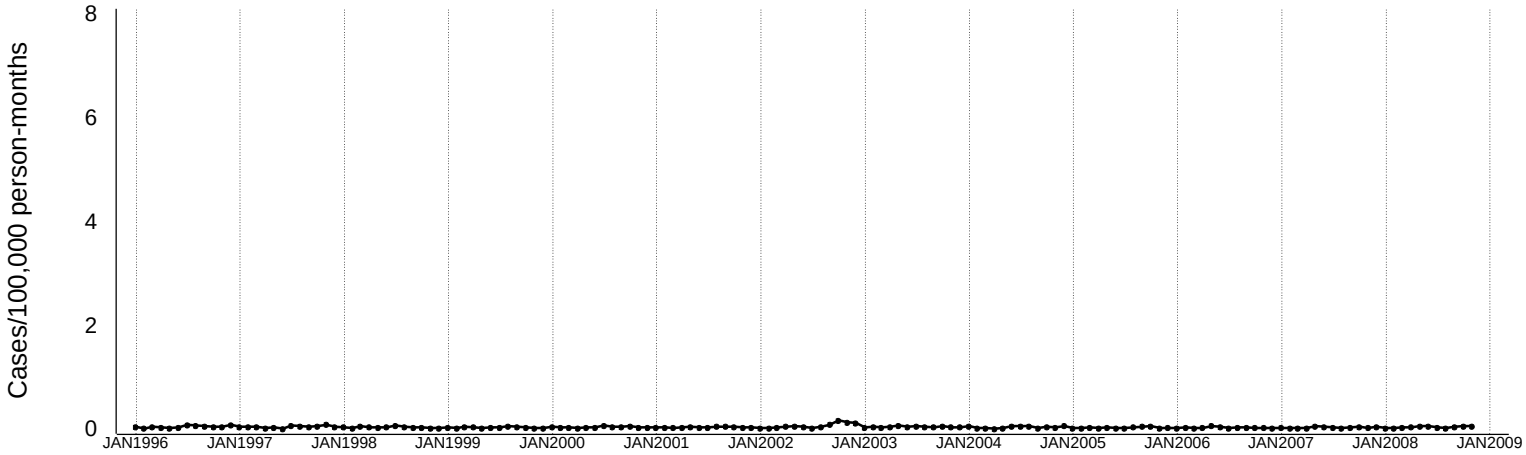
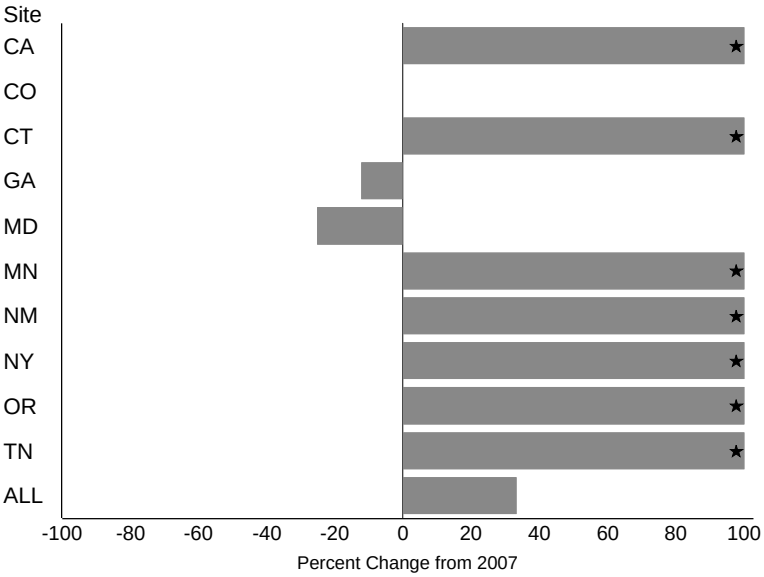
Shigella, all others

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

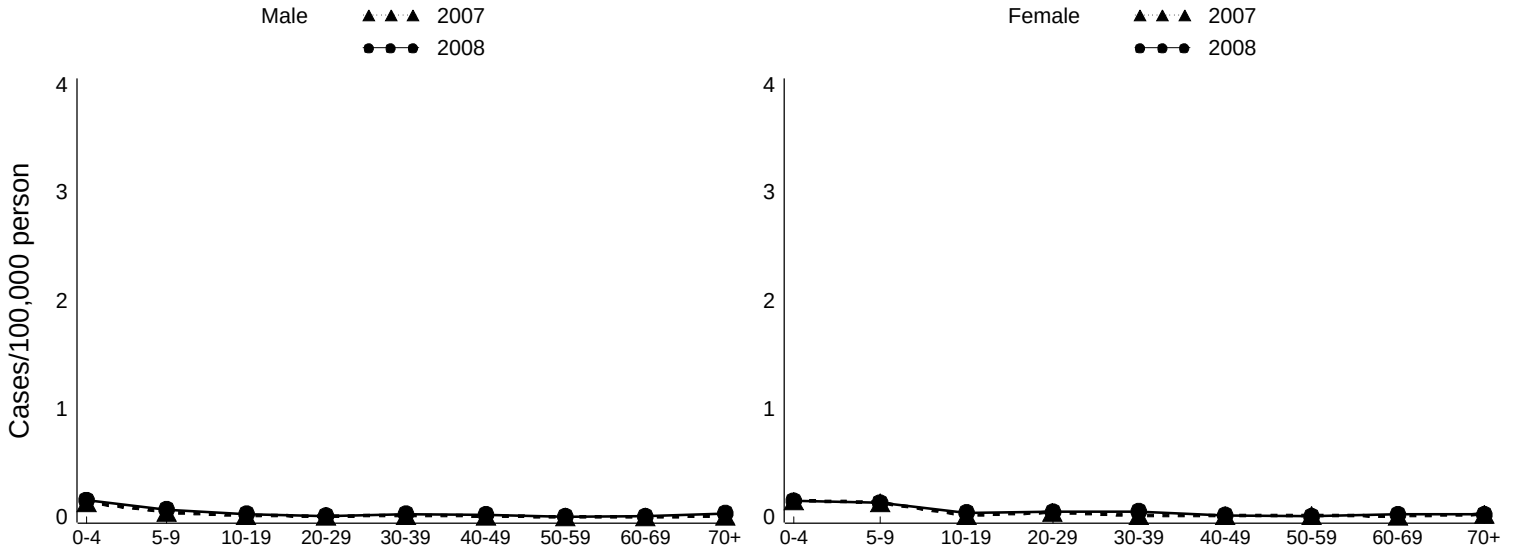


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	12	0.369	5	0.154	21	0.661
CO	3	0.111	3	0.111	6	0.232
CT	4	0.114	1	0.029	2	0.069
GA	94	0.985	107	1.121	86	0.935
MD	6	0.107	8	0.142	8	0.137
MN	6	0.115	3	0.058	4	0.082
NM	34	1.726	8	0.406	8	0.415
NY	7	0.164	3	0.070	3	0.066
OR	5	0.133	1	0.027	2	0.050
TN	34	0.552	15	0.244	30	0.502
ALL	205	0.446	154	0.335	169	0.379

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

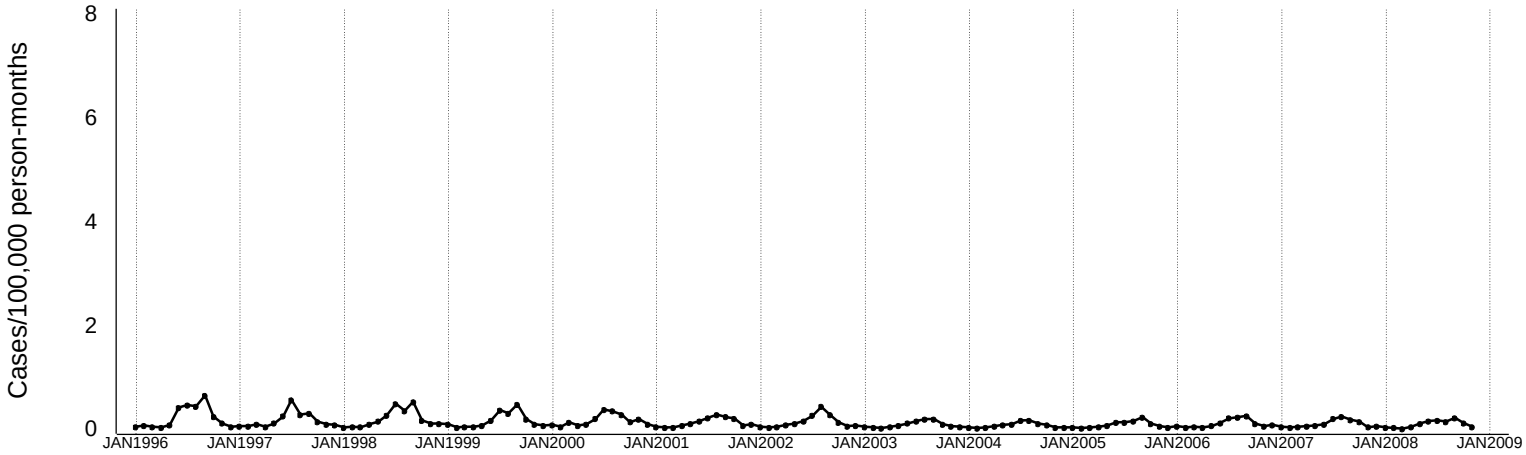
Calendar year through November: Rates for 2007 and 2008 by age group and sex



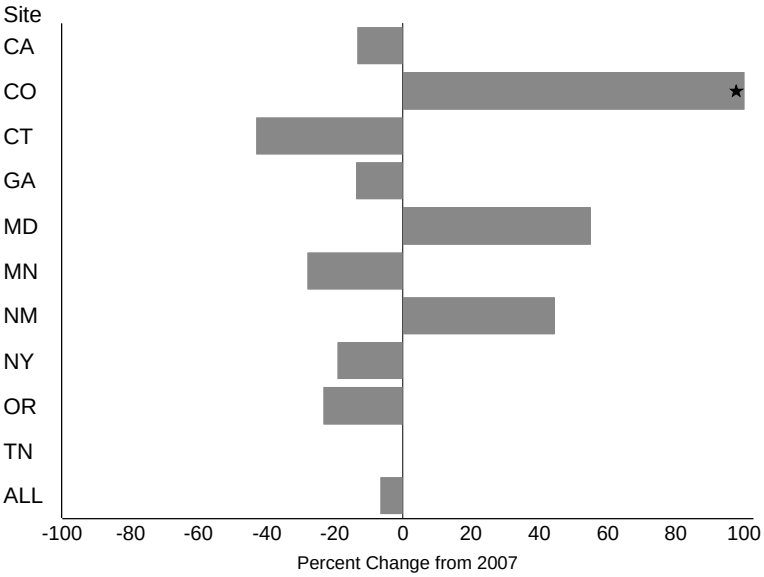
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

STEC O157

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

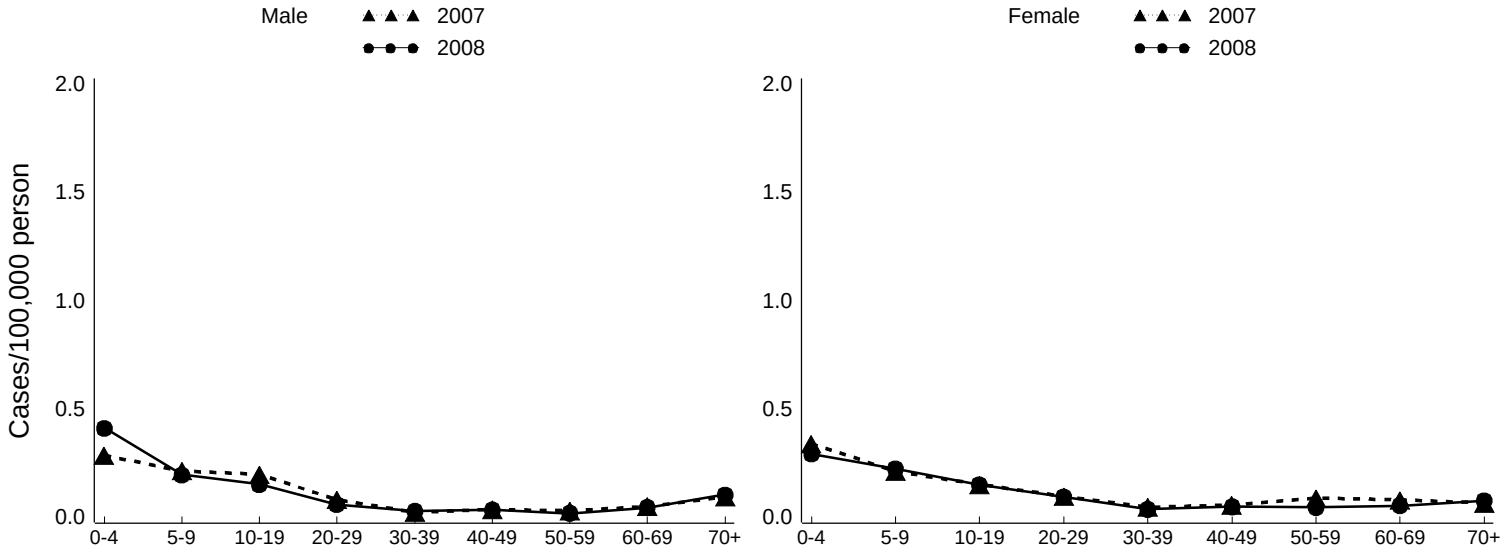


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	33	1.016	38	1.170	32	0.988
CO	82	3.036	30	1.111	29	1.129
CT	24	0.685	42	1.199	37	1.071
GA	38	0.398	44	0.461	32	0.350
MD	31	0.552	20	0.356	24	0.423
MN	116	2.232	161	3.098	128	2.489
NM	13	0.660	9	0.457	12	0.594
NY	47	1.101	58	1.359	55	1.289
OR	53	1.414	69	1.841	71	1.961
TN	51	0.828	51	0.828	52	0.861
ALL	488	1.062	522	1.136	471	1.051

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

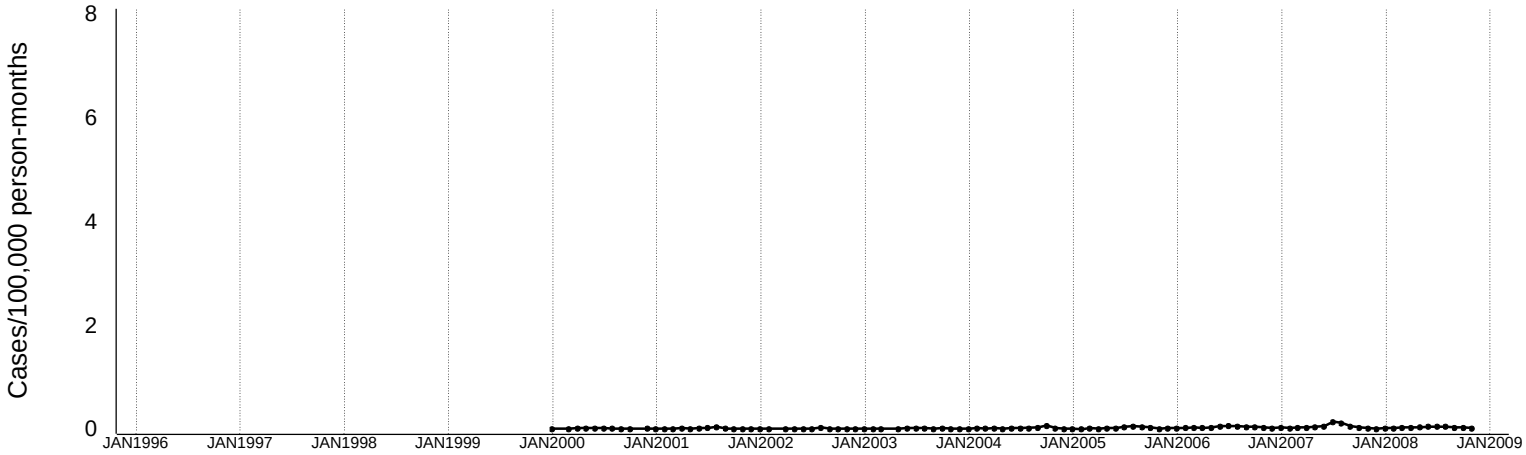
Calendar year through November: Rates for 2007 and 2008 by age group and sex



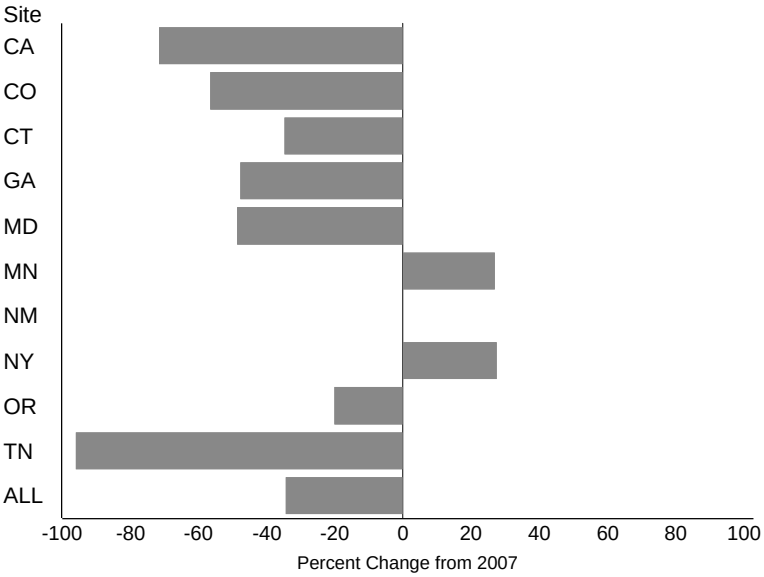
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

STEC Non-O157

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

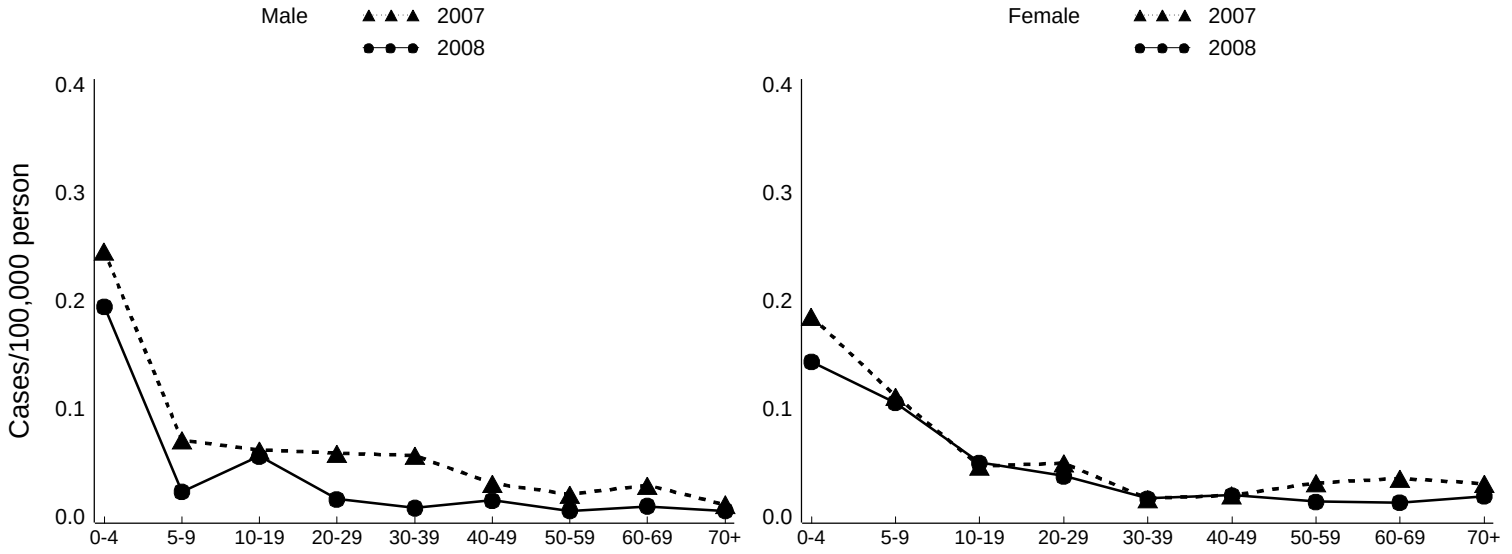


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	2	0.062	7	0.215	3	0.099
CO	24	0.888	55	2.036	15	0.575
CT	17	0.485	26	0.742	25	0.716
GA	22	0.230	42	0.440	15	0.158
MD	18	0.320	35	0.623	20	0.354
MN	52	1.000	41	0.789	29	0.564
NM	22	1.117	22	1.117	16	0.824
NY	14	0.328	11	0.258	15	0.355
OR	4	0.107	5	0.133	5	0.136
TN	1	0.016	24	0.390	8	0.131
ALL	176	0.383	268	0.583	151	0.328

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

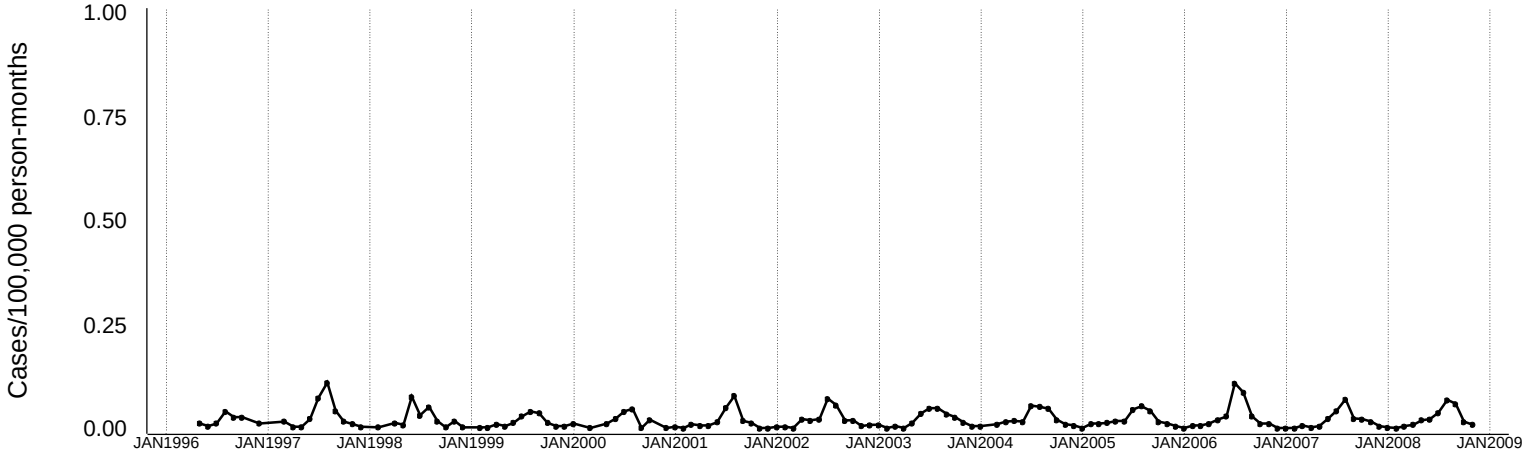
Calendar year through November: Rates for 2007 and 2008 by age group and sex



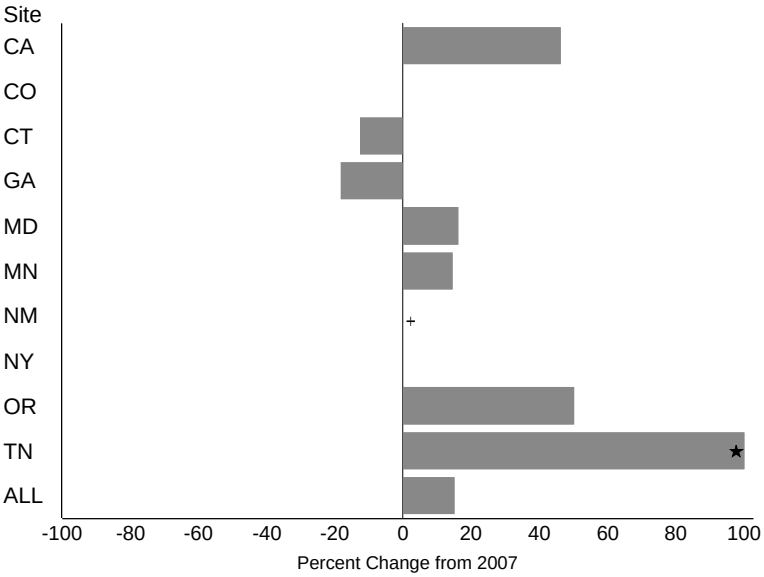
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

Vibrio, all species

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

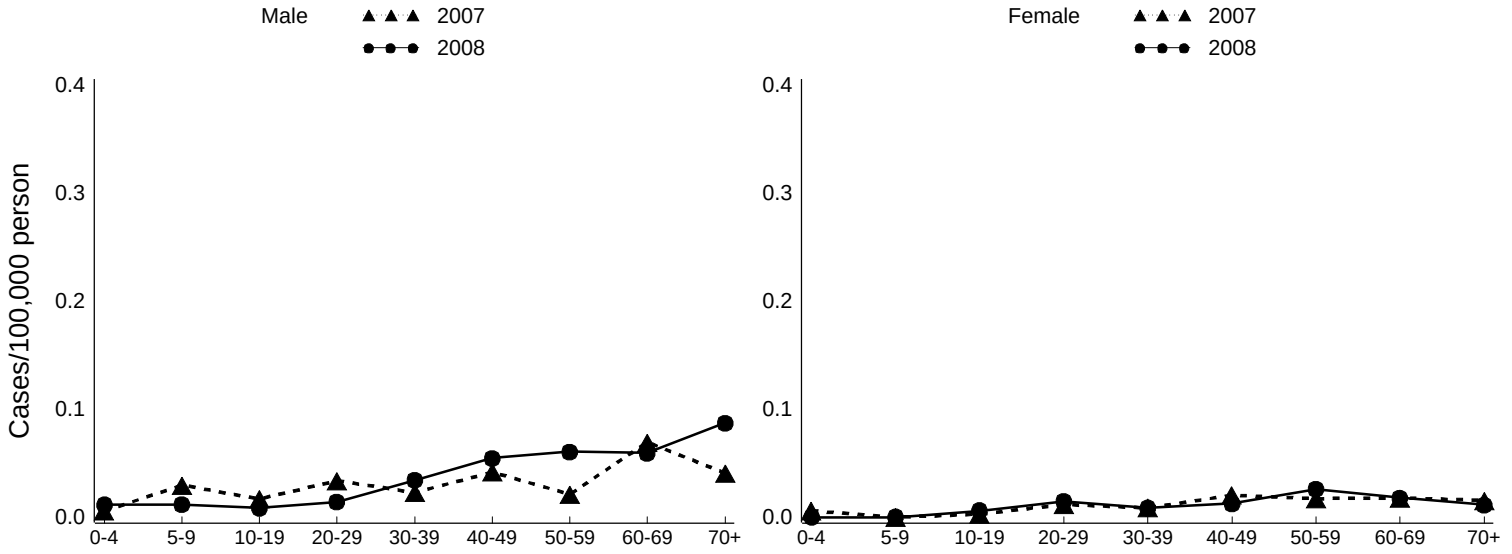


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	19	0.585	13	0.400	24	0.753
CO	4	0.148	4	0.148	5	0.192
CT	14	0.400	16	0.457	14	0.395
GA	18	0.189	22	0.230	24	0.261
MD	29	0.516	25	0.445	26	0.470
MN	8	0.154	7	0.135	5	0.090
NM	2	0.102	0	0.000	1	0.065
NY	9	0.211	9	0.211	7	0.171
OR	12	0.320	8	0.213	8	0.230
TN	8	0.130	3	0.049	7	0.117
ALL	123	0.268	107	0.233	121	0.272

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex



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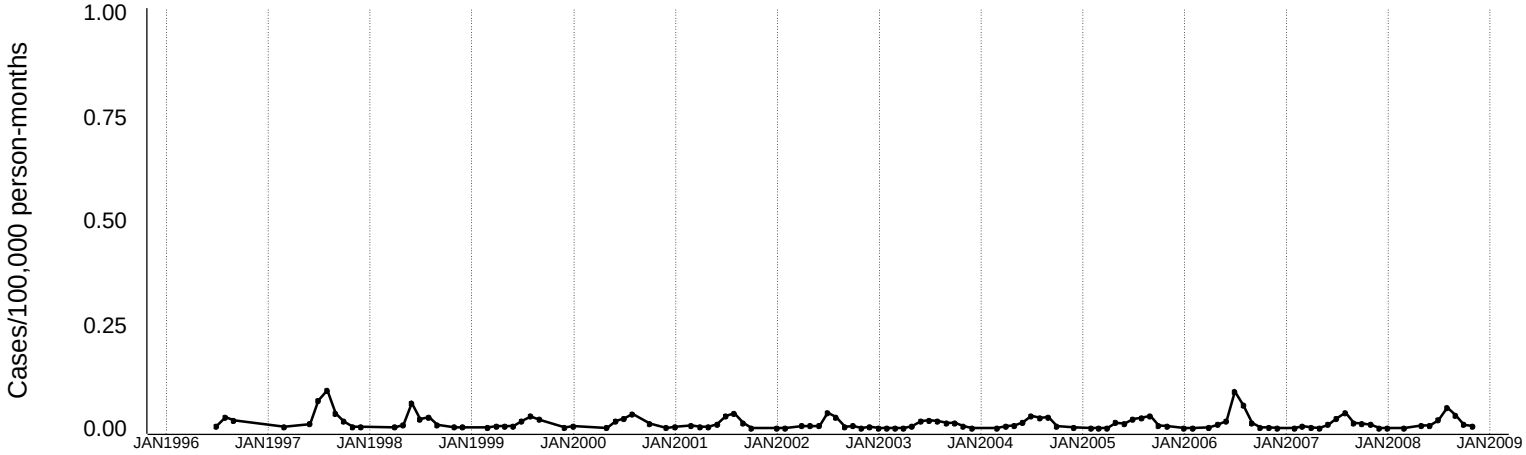
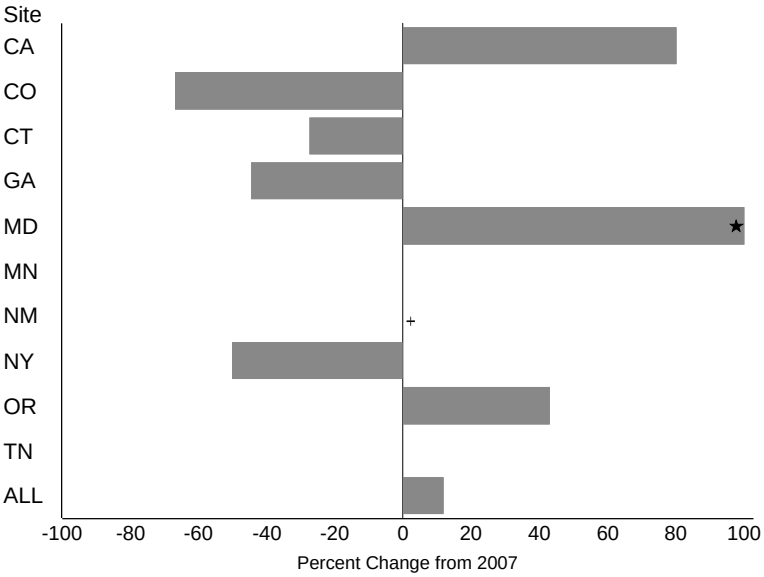
Vibrio parahaemolyticus

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

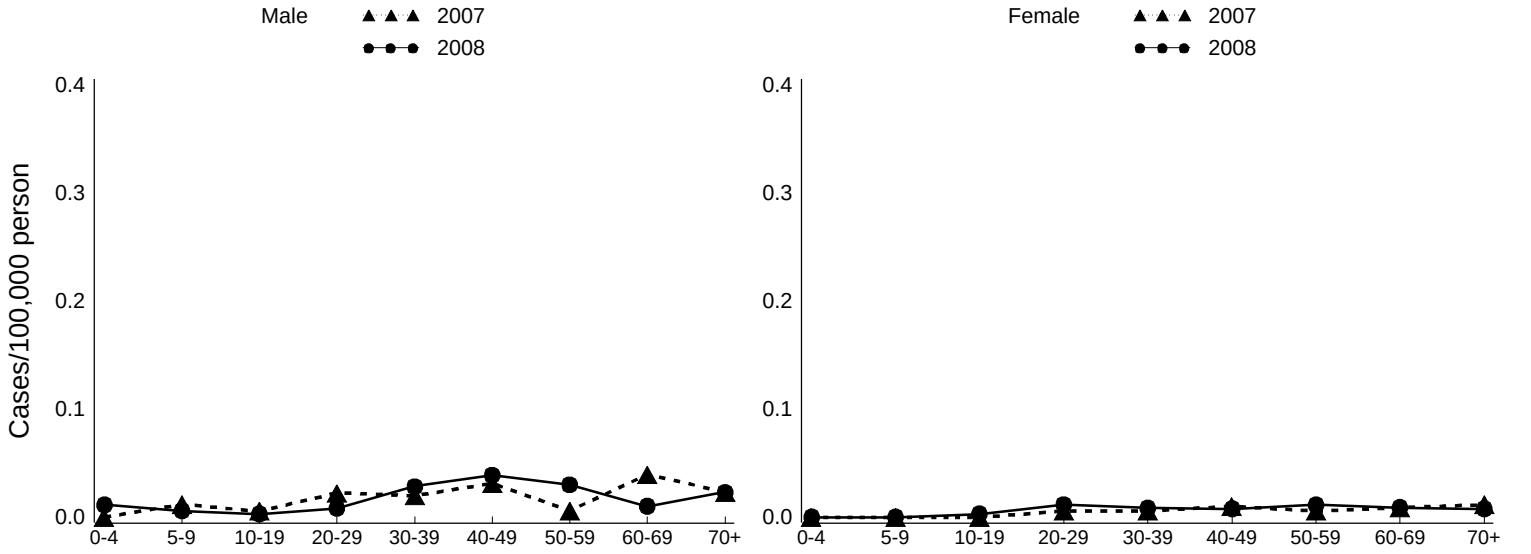


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	18	0.554	10	0.308	18	0.566
CO	1	0.037	3	0.111	4	0.146
CT	8	0.228	11	0.314	9	0.252
GA	5	0.052	9	0.094	6	0.070
MD	16	0.285	7	0.125	11	0.194
MN	4	0.077	4	0.077	2	0.039
NM	0	0.000	0	0.000	1	0.039
NY	4	0.094	8	0.187	4	0.104
OR	10	0.267	7	0.187	7	0.197
TN	1	0.016	1	0.016	2	0.030
ALL	67	0.146	60	0.131	64	0.143

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex



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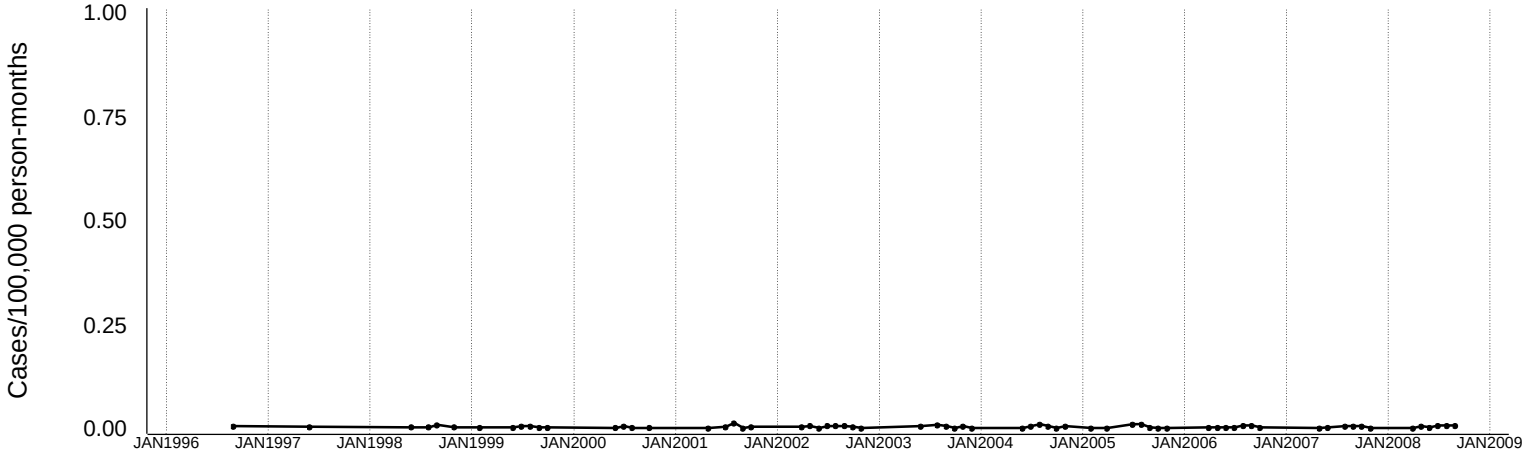
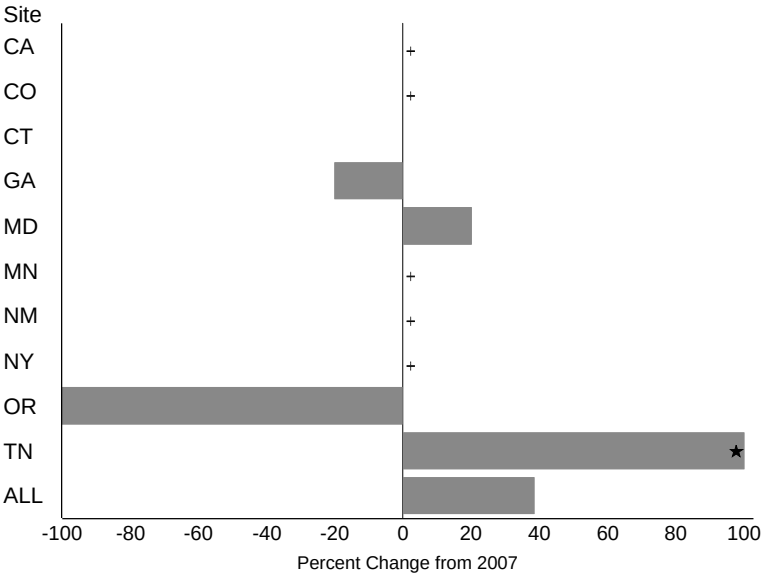
Vibrio vulnificus

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

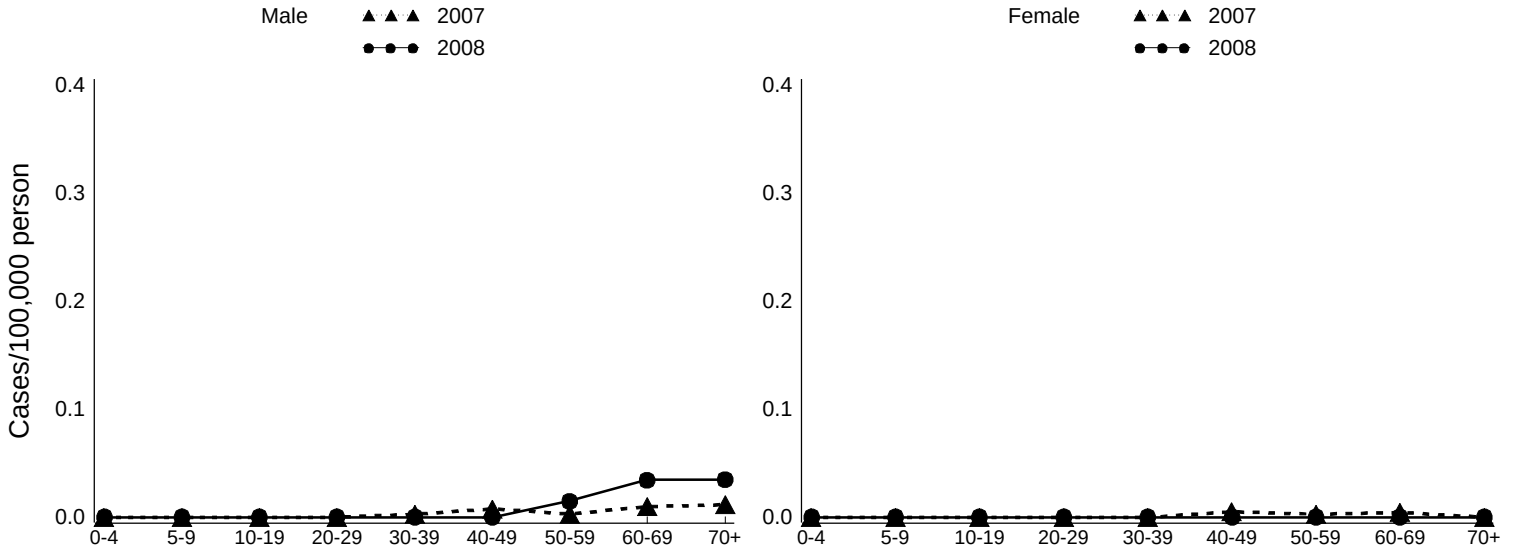


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	0	0.000	0	0.000	0	0.000
CO	2	0.074	0	0.000	0	0.016
CT	1	0.029	1	0.029	0	0.011
GA	4	0.042	5	0.052	5	0.059
MD	6	0.107	5	0.089	7	0.118
MN	1	0.019	0	0.000	0	0.004
NM	0	0.000	0	0.000	1	0.026
NY	0	0.000	0	0.000	0	0.009
OR	0	0.000	1	0.027	0	0.005
TN	4	0.065	1	0.016	1	0.023
ALL	18	0.039	13	0.028	16	0.035

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex



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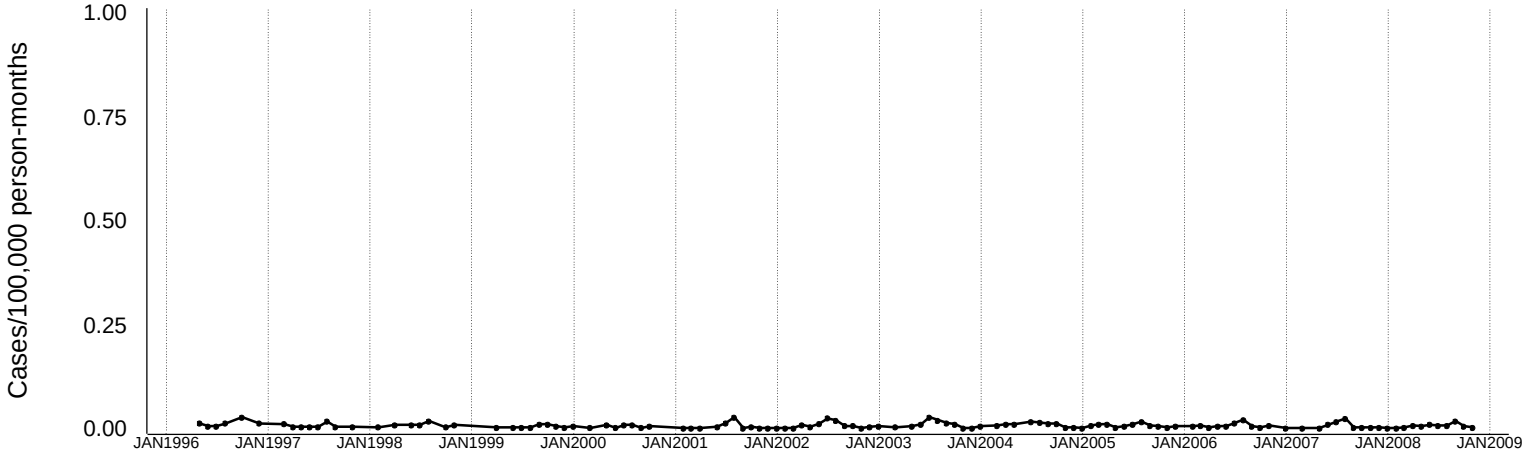
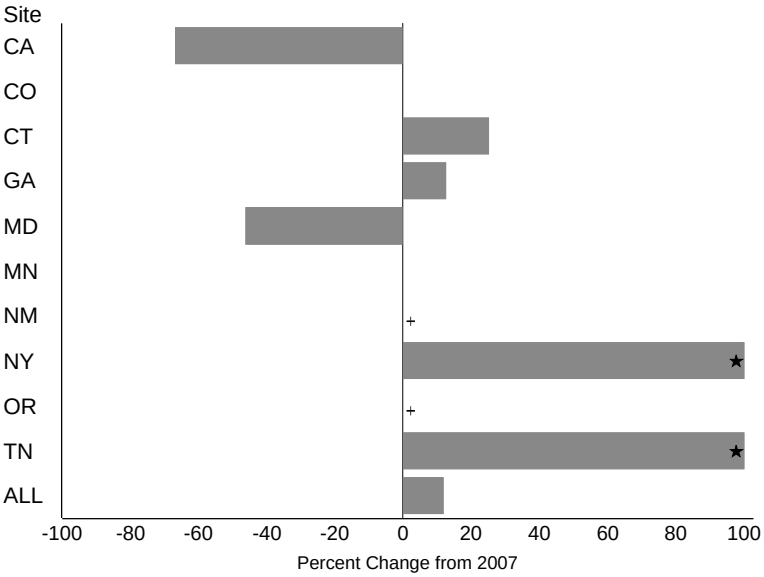
Vibrio, all others

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

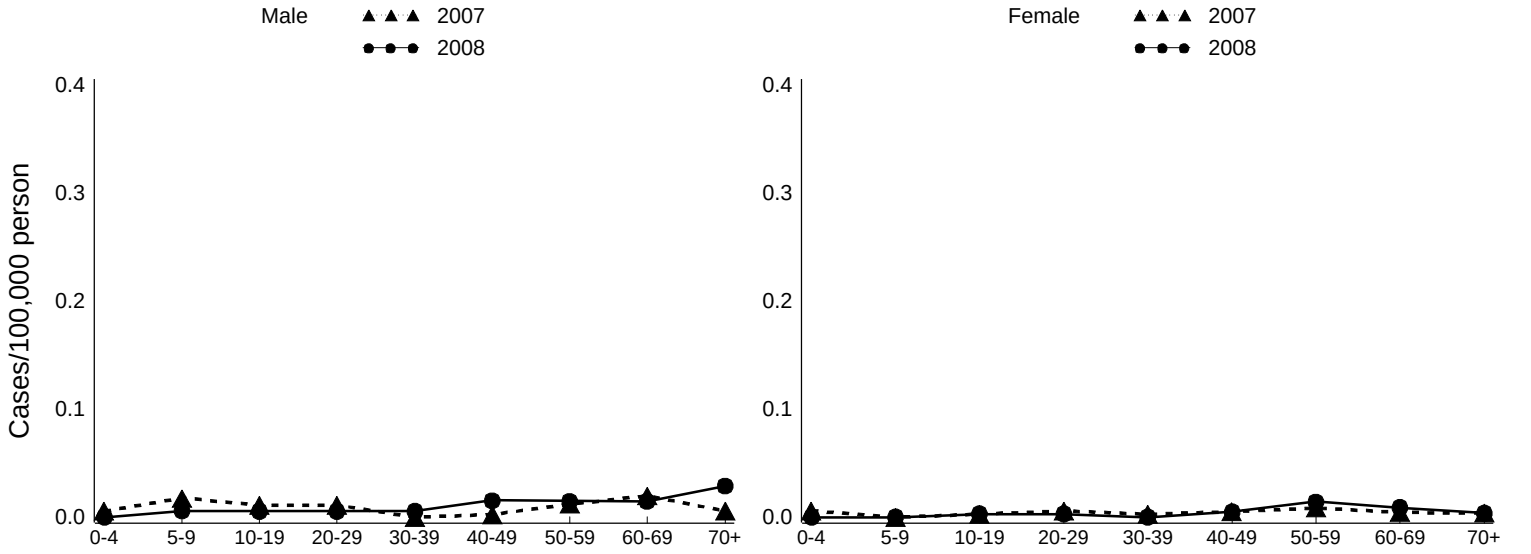


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	1	0.031	3	0.092	6	0.187
CO	1	0.037	1	0.037	1	0.031
CT	5	0.143	4	0.114	5	0.132
GA	9	0.094	8	0.084	12	0.132
MD	7	0.125	13	0.231	9	0.158
MN	3	0.058	3	0.058	2	0.047
NM	2	0.102	0	0.000	0	0.000
NY	5	0.117	1	0.023	2	0.058
OR	2	0.053	0	0.000	1	0.028
TN	3	0.049	1	0.016	4	0.064
ALL	38	0.083	34	0.074	42	0.094

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex



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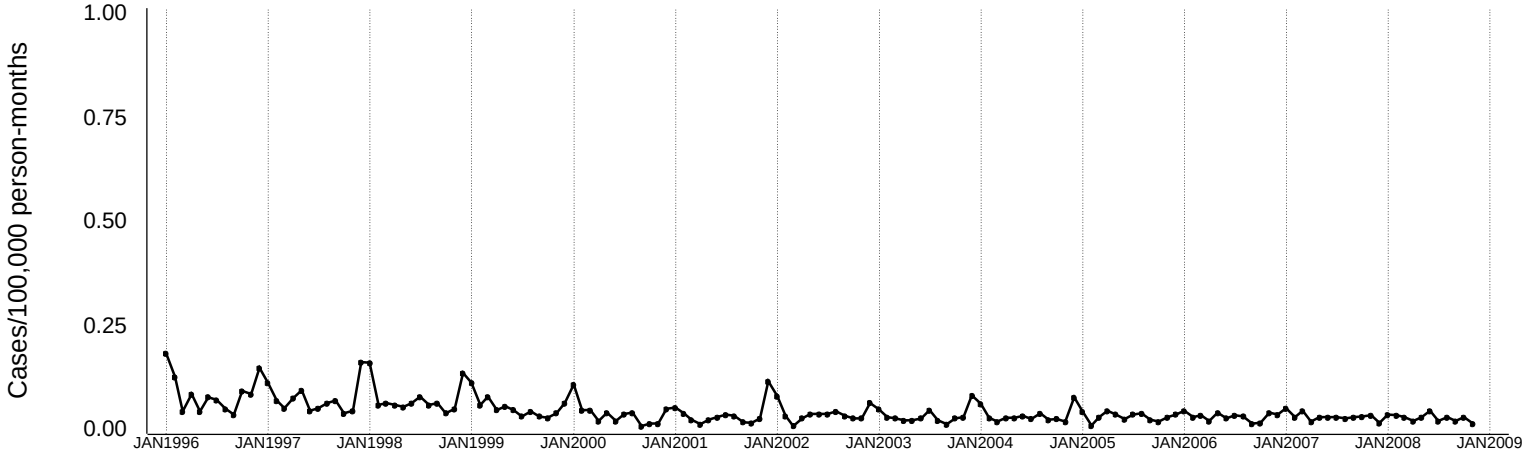
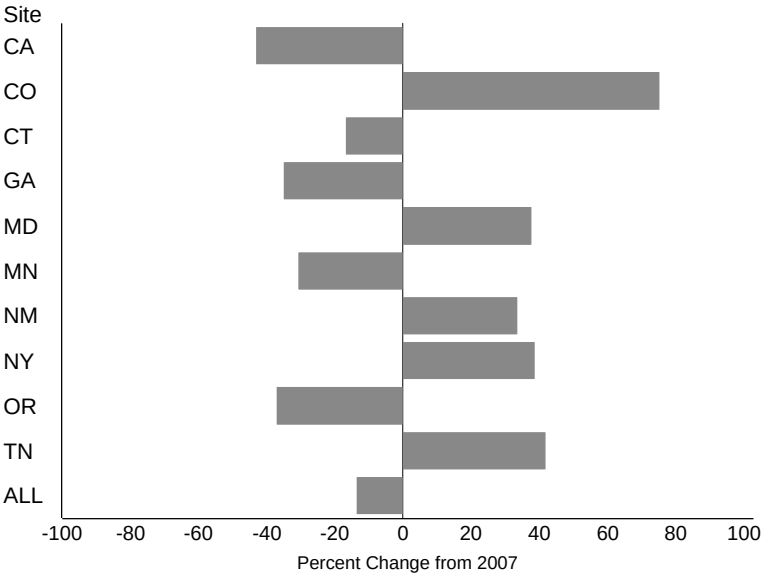
Yersinia

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

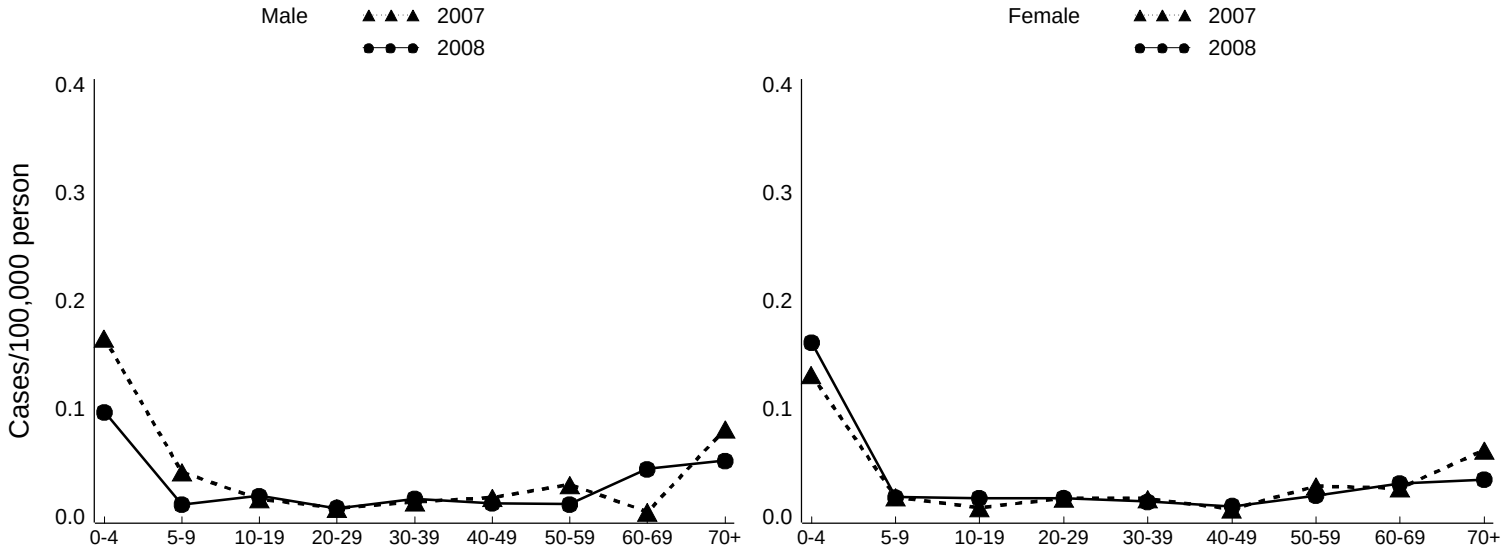


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	8	0.246	14	0.431	18	0.554
CO	7	0.259	4	0.148	6	0.231
CT	15	0.428	18	0.514	16	0.447
GA	28	0.293	43	0.451	32	0.352
MD	11	0.196	8	0.142	9	0.155
MN	16	0.308	23	0.443	18	0.343
NM	4	0.203	3	0.152	3	0.142
NY	18	0.422	13	0.305	14	0.322
OR	12	0.320	19	0.507	13	0.360
TN	17	0.276	12	0.195	17	0.291
ALL	136	0.296	157	0.342	145	0.323

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex



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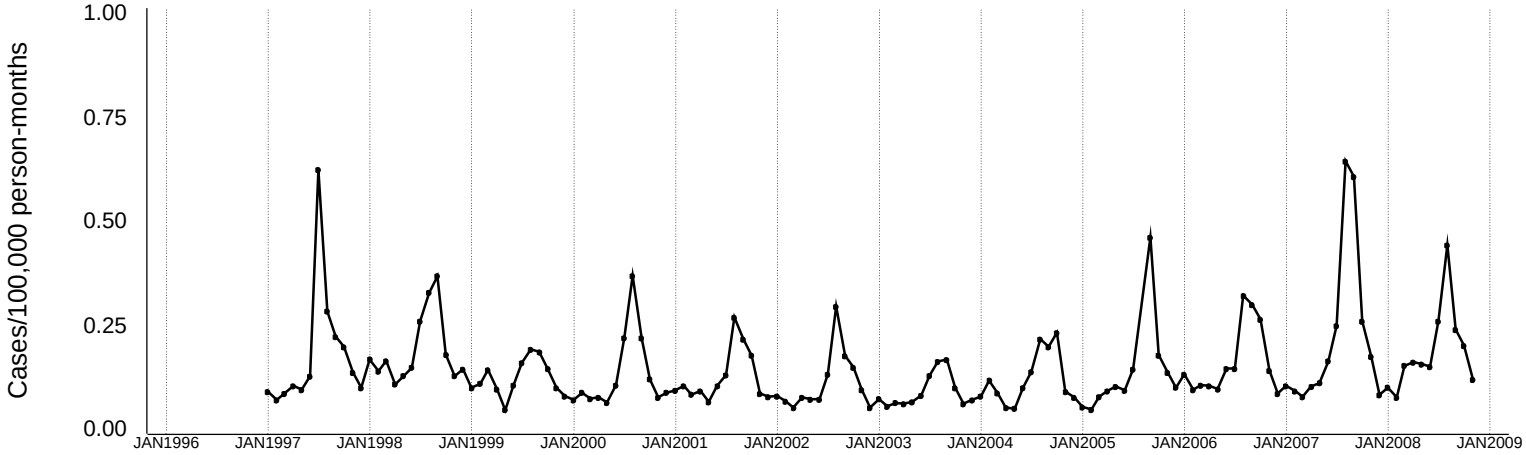
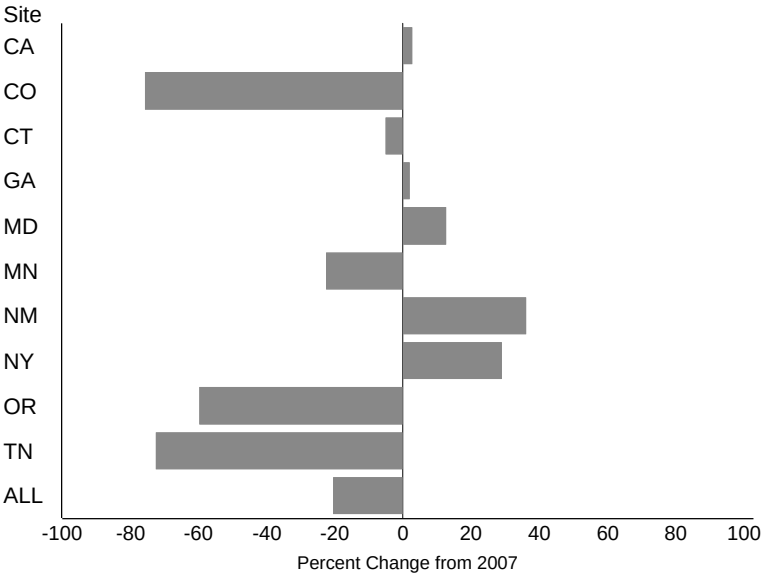
Cryptosporidium

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site

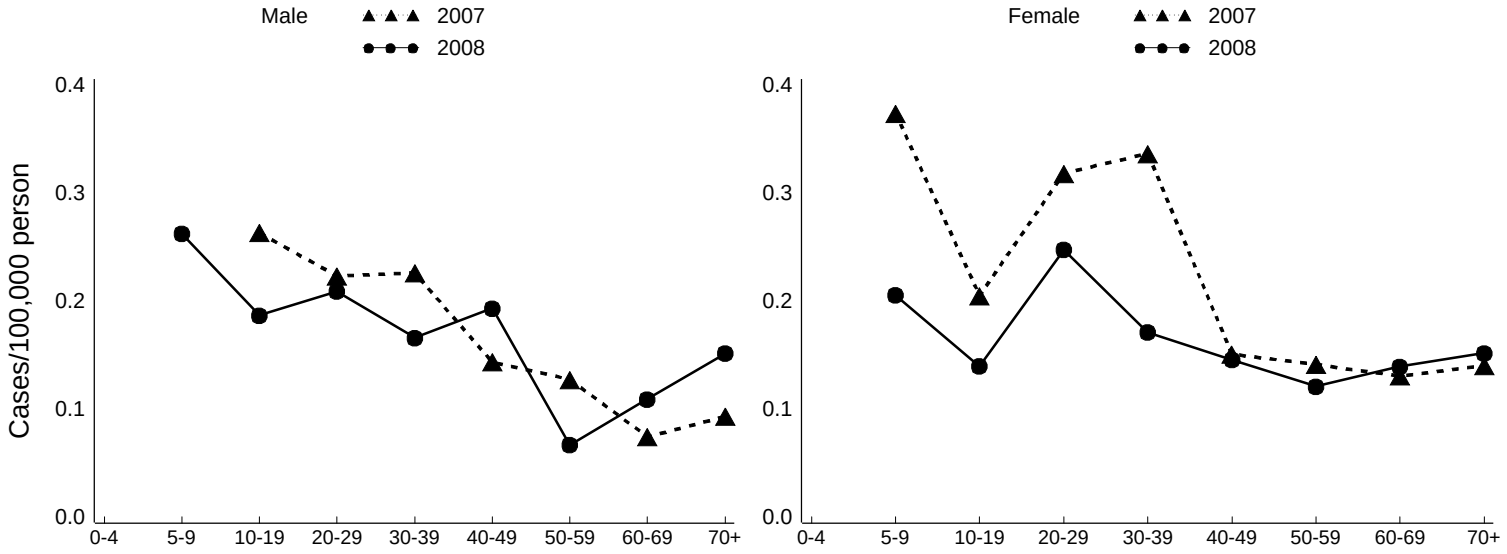


* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	Cases	Rate^	Cases	Rate^	Cases	Rate^
CA	39	1.200	38	1.170	39	1.120
CO	25	0.925	102	3.776	38	1.449
CT	38	1.085	40	1.142	41	1.167
GA	223	2.336	219	2.294	180	1.959
MD	36	0.641	32	0.570	24	0.427
MN	224	4.310	289	5.560	191	3.714
NM	159	8.071	117	5.939	49	2.484
NY	112	2.625	87	2.039	196	4.592
OR	51	1.361	126	3.362	62	1.679
TN	38	0.617	137	2.225	63	1.037
ALL	945	2.056	1187	2.583	882	1.931

*year 2003-2007 except for NM (2004-2007)
^cases/100,000 person

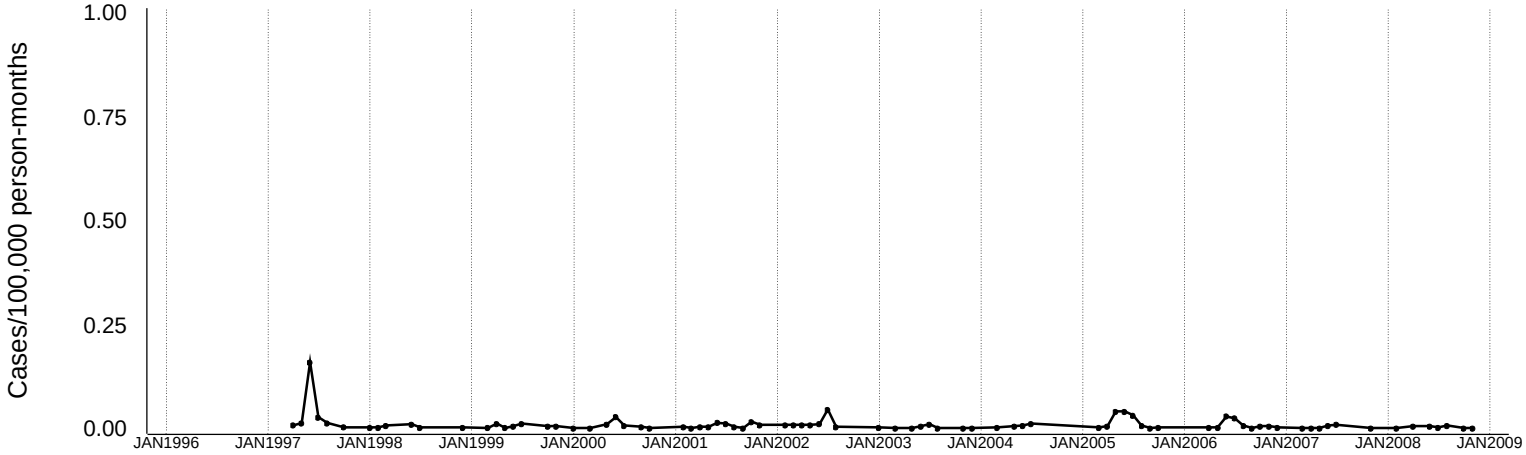
Calendar year through November: Rates for 2007 and 2008 by age group and sex



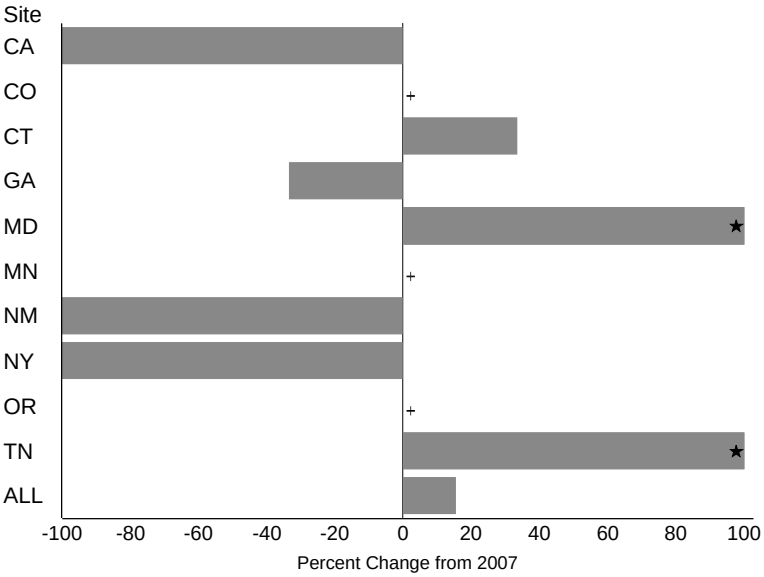
Data source: Preliminary FoodNet data, subject to change, not for public distribution. Report date: 06-January-2009

Cyclospora

Incidence rate of culture-confirmed infections, FoodNet sites, January 1996-November 2008



Calendar year through November: Percent change in rates between 2007 and 2008 by site



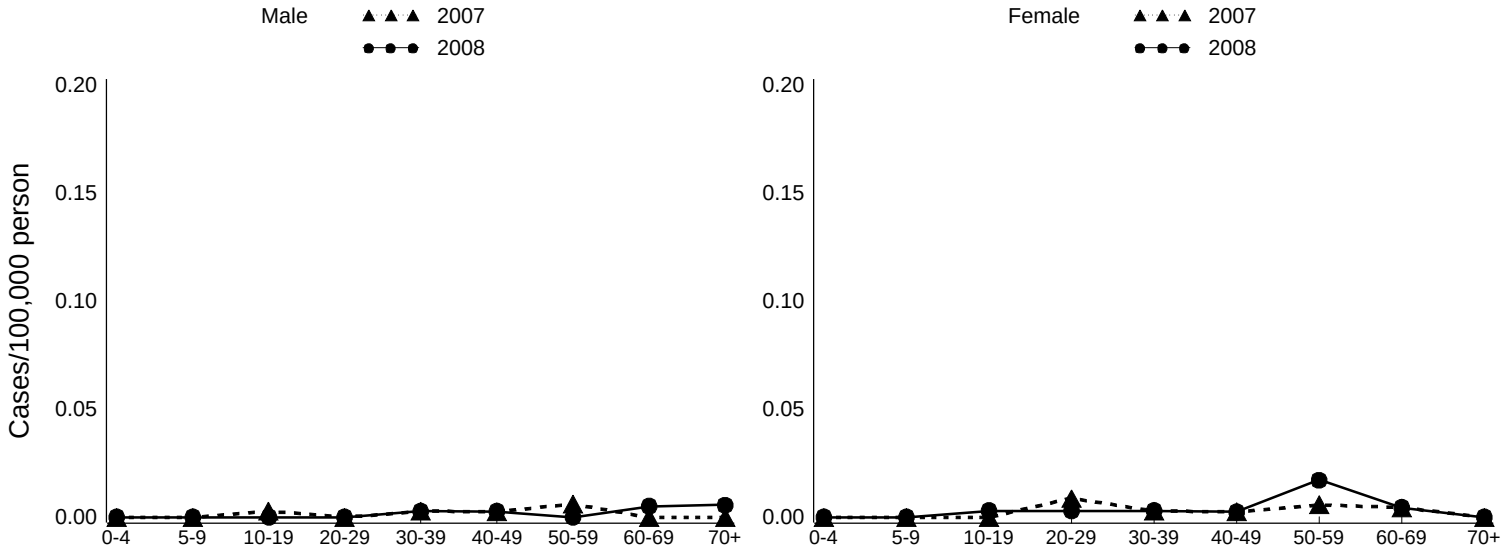
* Change exceeds 100%, +Percent increase cannot be calculated because 2007 rate is 0

	2008		2007		5 year mean*	
Site	**Cases**	**Rate^**	**Cases**	**Rate^**	**Cases**	**Rate^**
CA	0	0.000	1	0.031	1	0.019
CO	0	0.000	0	0.000	1	0.023
CT	4	0.114	3	0.086	12	0.338
GA	2	0.021	3	0.031	9	0.098
MD	3	0.053	1	0.018	2	0.032
MN	3	0.058	0	0.000	1	0.016
NM	0	0.000	2	0.102	2	0.090
NY	0	0.000	2	0.047	1	0.024
OR	0	0.000	0	0.000	1	0.027
TN	3	0.049	1	0.016	2	0.026
ALL	15	0.033	13	0.028	30	0.066

*year 2003-2007 except for NM (2004-2007)

^cases/100,000 person

Calendar year through November: Rates for 2007 and 2008 by age group and sex



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

Report date: 06-January-2009

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

Proposed by:	Mary Patrick, Priya Kadam, Reem Ghoneim, James Rodgers, Fred Angulo and *Campylobacter* broiler study analytic working group
Title:	Enumeration of *Campylobacter* on chickens at processing and retail: an explanation of regional differences in *Campylobacter* rates?
Date Submitted:	12/31/2008
Purpose:	Summarize results of recent study examining prevalence and quantifying microbial load of *Campylobacter* on whole chickens at grocery stores in nine FoodNet sites
Proposal:	Over a million persons are infected with *Campylobacter* in the U.S. each year. Consumption of poultry is an important source of infection. Although human *Campylobacter* infections are decreasing, there is substantial variation between states with higher incidences seen in the West. Our study attempted to understand this variation by comparing the prevalence and quantifying the microbial load of *Campylobacter* on whole chickens at grocery stores in nine FoodNet sites and comparing these data to data obtained in processing plants through USDA's Young Chicken Baseline Study.
Data sources:	FoodNet *Campylobacter* broiler study and USDA Young Chicken Baseline Study
Timeline:	Analysis currently ongoing
Publication:	Abstract to be submitted to International Association of Food Protection (IAFP); deadline Jan 21st

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

Proposed by:	Kashmira Date and Olga Henao
Title:	Trends in Listeriosis Incidence Among Persons 65 Years and Older, Foodborne Diseases Active Surveillance Network (FoodNet), United States, 1996–2007
Date Submitted:	1/5/2008
Proposal:	To update analysis examining trends in the incidence of listeriosis among persons 65 years of age and older (initial analyses were conducted by Kathryn Teates). We would like to submit results from the preliminary analysis as an abstract for the Epidemic Intelligence Conference (April 2008) and after analysis are completed draft and publish manuscript describing the results.
Previous analyses:	High Incidence of Laboratory-Confirmed Listeria Infections in Persons ≥ 65 Years of Age, Foodborne Diseases Active Surveillance Network (FoodNet), 1996-2005. (Co-authors: Teates K, Jones TF, Vugia D, Hurd S, Anderson BJ, Cronquist A, Farley MM, Plantenga M, Henao OL).
Data sources:	1996-2007 FoodNet Active Surveillance data
Timeline:	Analysis in progress
Publications:	Abstract to be submitted to Epidemic Intelligence Service Conference. Manuscript

Attribution of the human disease burden of *Campylobacter jejuni* using DNA-based subtyping and epidemiological approaches.

In collaboration with internal partners at CDC (FoodNet, OutbreakNet, PulseNet and NARMS), and external partners (State Public Health Laboratory partners, other federal partners and academia) we in the National *Campylobacter* Reference Laboratory at CDC, have begun a project to investigate the utility of using DNA-based subtyping of *C. jejuni* in combination with mathematical modeling / phylogenetic analysis, and epidemiological attribution data, to attribute human illness caused by *C. jejuni* to specific sources.

C. jejuni is a zoonotic pathogen that has a wide host range including poultry, cattle and sheep. A connection with contaminated food, particularly poultry is well recognized, but *C. jejuni* is also commonly found in wild birds and animals, pets and the aquatic environment. Most cases of *Campylobacter* infection occur sporadically rather than as part of recognized outbreaks and the sources of these infections are largely unknown. Defining the transmission routes of *C. jejuni* from farm to fork has been a particular challenge, despite 20 years of subtyping data, due to the enormous reservoir of extremely polymorphic *C. jejuni* strains in animals, the diversity of subtypes contaminating a food product, and the known ability of campylobacters to undergo frequent genetic recombination resulting in the reported instability of some *C. jejuni* subtypes and the lack of representative population samples.

Despite these challenges, the application of multilocus sequence typing (MLST) to characterize *C. jejuni* has greatly advanced our understanding of the molecular epidemiology of this important pathogen. This method is based on the principles of multilocus enzyme electrophoresis. Typically 450-500 bp internal fragments of seven housekeeping genes are sequenced. For each of the seven housekeeping genes, the different sequences present within *C. jejuni* are designated as distinct alleles and, for each isolate, the alleles at each of the seven loci define the allelic profile or sequence type (ST) (Dingle et al 2002).

To identify and prioritize appropriate food safety interventions, and to precisely measure the impact of interventions aimed at controlling human *Campylobacter* infections, it is critical to attribute the human disease burden of campylobacteriosis to specific sources. The development of source attribution models based on MLST data has proved valuable for identifying the likely sources of human campylobacteriosis in the United Kingdom (Wilson et al 2008) and New Zealand (French et al 2007). However, in the United States, we currently have no MLST data on sporadic human *C. jejuni* isolates and limited data on outbreak *C. jejuni* isolates (Sails et al 2003).

We plan to collaborate with internal and external partners to analyze by MLST representative *C. jejuni* strains from human, animal and food sources. The data will then be used to try to determine more accurate host assignment of strains of unknown source. This will:

a) Further our understanding of the infectious disease ecology of *C. jejuni*.

b) Improve our ability to determine the proportion of illness attributable to specific sources and become a valuable new tool in risk management by providing scientific information to regulatory agencies and other partners to improve public health prevention.

Initially we will focus on characterization of human *C. jejuni* isolates. We would like to request your assistance to:

1) Assess if you have in-house *C. jejuni* isolates from previous outbreaks in your respective state that you would be willing to provide to CDC for inclusion in this project.

2) Prospectively acquire *C. jejuni* isolates from known outbreaks with associated epidemiologic data for inclusion in this project.

If you would like more information on the project or have any questions, please contact Collette Fitzgerald at the National *Campylobacter* and *Helicobacter* Reference Laboratory, CDC (Tel: 404 639 0838, email: chf3@cdc.gov). Thank you.

References

Dingle, K. E., Colles, F. M., Ure, R., Wagenaar, J. A., Duim, B., Bolton, F. J., Fox, A. J., Wareing, D. R. A., and Maiden, M. C. J. 2002. Molecular characterization of *Campylobacter jejuni* clones: a basis for epidemiologic investigation. Emerg. Infect. Dis. 8:949-55.

French, N., P. Carter, J. Collins-Emerson, A. Midwinter, P. Mullner and D. Wilson. 2007. Comparing source attribution models for human campylobacterioisis. 14th International workshop on Campylobacter, Helicobacter and related organisms. 2-5 September, Rotterdam, The Netherlands.

Sails, A.D., Swaminathan, B. and Fields, P.I. 2003. Utility of Multilocus Sequence Typing as an Epidemiological Tool for Investigation of Outbreaks of Gastroenteritis Caused by *Campylobacter jejuni*. J. Clin. Micro. 41: 4733–39.

Wilson, D.J., E. Gabriel, A. J. Leatherbarrow, J. Cheesbrough, S. Gee, E. Bolton, A. Fox, P. Fearnhead, C.A. Hart, P. J. Diggle. 2008. Tracing the source of campylobacteriosis. PLoS Genet. 4: e1000203.