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Risk Factors for Non-O157 Shiga Toxin–Producing Escherichia coli Infections, United States

Appendix

Appendix Table 1. Factors examined in case-control study of domestically acquired non-O157 Shiga toxin-producing *E. coli* infections among infants, with odds ratios (ORs)— FoodNet 2012-2015

Characteristic food consumed or exposure*		Cases [†] (n=27) n/N [†] (%)		Controls [†] (n=68)		Multivariable analysis OR (95% CI)	
Characteristic, food consumed, or exposure [*] Demographic	11/1N'	(%)	n/N†	(%)	OR	(90% CI)	P
Asian	1/12	(8)	0/39	(0)	9.0	(0.1-3674.7)	1.0
Black Hispanic	1/11 1/9	(9) (11)	4/39 3/41	(10)	0.7 1.7	(0-6.2) (0.1-17.6)	1.0 1.0
Aultiracial	0/10	(11)	3/4 T 4/38	(7) (11)	0.2	(0-3)	1.0
Vhite	10/11	(91)	31/39	(79)	2.3	(0.4-26.9)	1.0
Dairy		(a=)					
ce cream Branarad inside the home	3/11	(27)	6/41 5/42	(15)	1.3	(0.2-7.5)	1.0
Prepared inside the home Prepared outside the home	3/11 0/11	(27) (0)	5/42 1/41	(12) (2)	1.8 1.4	(0.3-9.5) (0-49.9)	1.0 1.0
Pasteurized milk	1/11	(9)	4/42	(10)	0.7	(0-5.9)	1.0
Prepared inside the home	1/10	(10)	4/42	(10)	1.2	(0.1-11.6)	1.0
Soft cheese (e.g., feta, brie) prepared inside the home	0/11	(0)	1/41	(2)	0.3	(0-14.1)	1.0
/ogurt Prepared inside the home	1/7 1/10	(14) (10)	5/40 6/41	(12) (15)	1.5 0.6	(0.1-13.3) (0-4.5)	1.0 1.0
Fruit and Vegetable	1/10	(10)	0/41	(10)	0.0	(0 4.0)	1.0
\pples	0/10	(0)	2/41	(5)	1.0	(0-26.8)	1.0
Prepared inside the home	0/11	(0)	2/41	(5)	0.9	(0-23.5)	1.0
Bananas Prepared inside the home	3/9 4/14	(33) (29)	8/40 8/40	(20) (20)	4.7 0.9	(0.6-52.0) (0.1-7.6)	1.0 1.0
Prepared outside the home	1/10	(10)	0/40	(0)	81.0	(2.0-29190.1)	1.0
lueberries	1/11	(9)	0/41	(0)	57.0	(1.4-20687.9)	1.0
Prepared inside the home	1/12	(8)	0/41	(0)	15.0	(0.3-5804.6)	1.0
Prepared outside the home	1/12	(8)	0/41	(0)	15.0	(0.3-5804.6)	1.0
Carrots Prepared inside the home	2/11 2/12	(18) (17)	0/41 0/41	(0) (0)	42.9 18.0	(1.9-11827.7) (0.8-2072.8)	1.0 1.0
xotic fruit (e.g., kiwi, avocado)	2/12 1/8	(17)	3/41	(0) (7)	3.8	(0.3-65.5)	1.0
Prepared inside the home	1/12	(8)	3/40	(8)	0.2	(0-5.6)	1.0
rapes	1/8	(12)	1/41	(2)	17.0	(0.6-3076.9)	1.0
Prepared inside the home	1/12	(8)	1/42	(2)	2.1	(0.1-41.2)	1.0
ettuce	1/11	(9)	0/41	(0)	39.0	(0.9-14310.8)	1.0
ranges Prepared inside the home	1/9 1/12	(11) (8)	1/41 1/42	(2) (2)	3.4 1.9	(0.1-70.0) (0.1-38.5)	1.(1.(
rganic produce	1/8	(12)	3/39	(8)	3.0	(0.2-42.3)	1.0
ther fruit (not citrus, pears, apples, tree fruit, strawberries, raspberries, grapes, bananas,	1/11	(9)	0/41	(0)	9.0	(0.1-3674.7)	1.0
antaloupe, watermelon, honeydew, pineapple, or exotic fruit)						. ,	
Prepared outside the home	1/12	(8)	0/41	(0)	9.0	(0.1-3674.7)	1.0
Cars	0/10	(0)	1/41	(2)	1.9	(0-64.1)	1.0
Prepared inside the home aspberries	1/11 1/11	(9) (9)	1/41 0/41	(2) (0)	3.4 39.0	(0.1-70.0) (0.9-14310.8)	1.(1.(
rawberries	0/10	(0)	1/41	(0) (2)	1.9	(0-64.1)	1.0
Prepared inside the home	0/11	(0)	1/41	(2)	1.7	(0-57.0)	1.0
ee fruit other than citrus, pears, or apples (e.g., apricot, nectarine, peach, plum)	1/9	(11)	2/41	(5)	2.2	(0.1-36.3)	1.(
Prepared inside the home	1/12	(8)	2/42	(5)	1.0	(0.1-18.1)	1.(
Vatermelon	0/12	(0)	1/42	(2)	0.1	(0-6.8)	1.0
Prepared inside the home leat, Poultry, Pork, and Seafood	0/12	(0)	2/43	(5)	0.4	(0-9.0)	1.0
eef	1/10	(10)	1/40	(2)	6.3	(0.3-119.9)	1.0
Prepared at home	0/9	(0)	1/40	(2)	2.3	(0-78.4)	1.(
hicken	0/9	(0)	5/41	(12)	0.1	(0-1.6)	1.0
Prepared inside the home	0/9	(0)	5/41	(12)	0.2	(0-3.6)	1.0
round beef at a fast-food restaurant round beef hamburger prepared at a fast-food restaurant	1/10 1/10	(10) (10)	0/40 0/40	(0) (0)	45.0 57.0	(1.1-16436.6) (1.4-20687.9)	1.(1.(
round beef other than hamburgers	0/10	(0)	2/41	(5)	0.6	(0-11.3)	1.
Prepared at a fast-food restaurant	3/12	(25)	0/40	(0)	37.1	(2.4-1646.2)	1.0
andled meat (e.g., beef, pork, poultry) or fish in past 3 months	3/8	(38)	6/40	(15)	3.7	(0.6-25.7)	1.0
ousehold member handled raw beef in past 3 months	1/13	(8)	4/40	(10)	0.2	(0-5.3)	1.
rganic meat that meat neutry, or fish (not chicken, turkey, nork, lemb, yeak jorky, yenisen, elk, gest	1/12	(8)	1/38	(3)	1.9	(0.1-38.5)	1.0
ther meat, poultry, or fish (not chicken, turkey, pork, lamb, veal, jerky, venison, elk, goat, son, salami, pepperoni, summer sausage, shrimp, shellfish, or raw fish/sushi) prepared	0/10	(0)	1/41	(2)	2.3	(0-78.4)	1.
side the home							
ork prepared inside the home	0/10	(0)	1/41	(2)	2.3	(0-78.4)	1.0
alami prepared inside the home	1/10	(10)	0/40	(0)	9.0	(0.1-3674.7)	1.
urkey prepared inside the home	0/10	(0)	2/42	(5)	0.4	(0-10.4)	1.
enison Branarad inside the home	0/9 0/10	(0)	1/40	(2)	1.4 1.2	(0-49.9)	1.(1.(
Prepared inside the home nvironmental	0/10	(0)	1/40	(2)	1.2	(0-42.8)	1.
amping	1/11	(9)	1/41	(2)	7.2	(0.4-130.6)	1.
ontact with animal-based dog treats (e.g., rawhides, pig's ear)	0/8	(0)	1/39	(3)	1.7	(0-57.0)	1.
ontact with animals	2/10	(20)	25/41	(61)	0.1	(0-0.7)	1.
ontact with any wild animals or their droppings	1/11	(9)	0/41	(0)	15.0	(0.3-5804.6)	1.
ontact with birds	0/9	(0)	1/41	(2)	1.0	(0-35.6)	1.
ontact with cats ontact with chickens	1/10 0/9	(10) (0)	13/41 1/41	(32) (2)	0.4 1.9	(0-2.3) (0-64.1)	1. 1.
ontact with dog food	1/11	(9)	0/42	(2)	9.0	(0.1-3674.7)	1.
ontact with dogs	2/11	(18)	22/43	(51)	0.3	(0.1-1.3)	1.
busehold member visited/worked on farm with animals	1/12	(8)	3/40	(8)	1.2	(0-554.8)	1.
pusehold member visited/worked on farm with cows	1/13	(8)	3/40	(8)	1.0	(0-8290.8)	1.
ve on a farm	2/14	(14)	4/41	(10)	2.6	(0.1-390.7)	1.
With calves present With chickens present	1/13 0/13	(8)	1/40 2/41	(2)	3.0 0.3	(0.1-612.5) (0-10 1)	1.0 1.0
With chickens present With cows present	2/12	(0) (17)	2/41 3/40	(5) (8)	0.3 3.6	(0-10.1) (0.3-36.6)	1. 1.
ve on, visit, or work on a farm, petting zoo, or fair	3/12	(17)	5/40	(12)	51.0	(1.2-18562.2)	1.
And have contact with chickens	0/12	(0)	1/40	(2)	1.0	(0-35.6)	1.
With calves present	2/11	(18)	1/39	(3)	69.0	(1.7-24939.1)	1.
With chickens present	0/13	(0)	2/40	(5)	0.2	(0-6.7)	1.
With cows or calves present	2/12	(17)	5/40	(12)	1.5	(0.1-31.6)	1.0
With cows present	2/12 0/13	(17) (0)	5/40	(12)	1.3	(0.1-10.4)	1.0
With turkeye present		(U)	1/40	(2)	0.6	(0-21.3)	1.0
With turkeys present /isit a fair				in			1 /
With turkeys present Visit a fair Visit a farm with cows present	0/13 0/14 0/13	(0) (0)	1/41 1/42	(2) (2)	0.6 1.7	(0-21.3) (0-57.0)	1.0 1.0

		Cases [†]	Cor	ntrols†			
	(n=27)		(n	=68)	Multivariable analysis		
Characteristic, food consumed, or exposure*	n/N†	(%)	n/N†	(%)	OR	(95% CI)	P‡
Work, play, or help in garden	1/12	(8)	0/41	(0)	39.0	(0.9-14310.8)	1.00
Water							
Drink bottled water	8/12	(67)	22/38	(58)	1.2	(0.3-5.0)	1.00
Drink untreated water (e.g., lake, spring, or river)	0/10	(0)	1/39	(3)	1.4	(0-49.9)	1.00
Swim or play	NA	ŇÁ	NA	ŇÁ	NA	NA	NA
In pool	0/11	(0)	2/41	(5)	1.1	(0-18.8)	1.00
In water	0/11	(0)	3/41	(7)	0.2	(0-4.5)	1.00
In water park	0/12	(0)	1/41	(2)	1.4	(0-49.9)	1.00
Treatment for well water at home other than with a whole-house point-of-entry device	0/13	(0)	2/41	(5)	0.8	(0-14.8)	1.00
Use municipal water at home	3/9	(33)	14/40	(35)	1.5	(0.2-11.3)	1.00
Use municipal water away from home	1/8	(12)	6/33	(18)	0.7	(0.1-5.3)	1.00
Use private well water at home	3/13	(23)	5/41	(12)	2.9	(0.3-26.1)	1.00
Use private well water away from home	1/10	(10)	0/34	(0)	15.0	(0.3-5804.6)	1.00
Whole house point-of-entry treatment for well water at home	0/12	(0)	2/40	(5)	0.7	(0-12.8)	1.00
Other							
Antibiotics prior to illness	2/11	(18)	2/40	(5)	10.1	(1.0-144.1)	1.00
Attend childcare setting or center	1/10	(10)	9/41	(22)	0.6	(0.1-3.5)	1.00
Attend, work, or volunteer at a childcare center	5/11	(45)	5/40	(12)	4.5	(1.0-22.1)	1.00
Children under 5 years of age in household	3/12	(25)	17/40	(42)	0.5	(0.1-1.8)	1.00
Contact with someone with diarrheal illness	1/9	(11)	1/38	(3)	4.1	(0.2-79.4)	1.00
Eat at a fast-food restaurant	2/13	(15)	0/40	(0)	27.7	(1.3-4327.9)	1.00
Eat at a table service restaurant	1/11	() (9)	0/40	(O)	15.0	(0.3-5804.6)	1.00
Live, work, or visit residential facility (e.g., nursing home, hospital)	1/9	(11)	3/40	(8)	3.0	(0.2-44.4)	1.00
Stomach acid-reducing medications in 4 weeks before illness	1/11	() (9)	3/41	(7)	1.3	(0.1-10.8)	1.00
Travel in state of residence	1/10	(10)	8/39	(21)	0.6	(0-3.8)	1.00
Travel outside state of residence	1/13	(8)	4/42	(10)	1.2	(0.1-9.7)	1.00
*In the 7 days before illness began unless otherwise specified. Only exposures with sufficient sample s	sizes for analysi			ng are listed	Inte	erviewers told respon	idents to

Interviewers told respondents to

The 7 days before illness began unless otherwise specified. Only exposures with sufficient sample sizes for analysis after nearest-neighbors matching are listed. Interviewers told respondents to consider foods prepared at any home to be prepared at home and foods prepared at a restaurant or commercial food service establishment to be prepared outside the home. [†]The initial sample for each exposure was 27 cases and 68 controls. During nearest-neighbors matching, cases and controls without a match were excluded for the exposure under consideration. Thus, the numbers (i.e., N in the table) of cases and controls that were matched and included in the analysis of each exposure is smaller than the total. Number of exposed is denoted by n. Nineteen controls did not match to any case for any exposure. They were different from cases: most reported \geq 30 exposures whereas most cases reported <25 exposures. [‡]P is adjusted for multiple testing using the Benjamini-Hochberg-Yekutieli method

Appendix Table 2. All factors examined in case-control study of domestically acquired non-O157 Shiga toxin-producing E. coli infections, with odds ratios (ORs)— FoodNet, 2012-2015

	Case (n=77		Controls† (n=2,365)		Multivariable analysis		
Characteristic or exposure*	n/N [†]	(%)	n/N [†]	(%)	OR	(95% CI)	- P‡
)emographic				x 7		x <i>i</i>	
merican Indian or Alaskan Native	2/404	(0)	10/1204	(1)	0.8	(0.2-3.3)	1.00
sian	9/407	(2)	25/1198	(2)	1.1	(0.4-2.7)	1.00
lack	19/410	(5)	94/1205	(8)	0.5	(0.3-0.8)	0.19
lispanic	76/425	(18)	114/1256	(9)	2.9	(2.0-4.3)	<0.00
/ultiracial	12/413	(3)	29/1201	(2)	1.0	(0.5-2.1)	1.00
Vhite	369/411	(9Ó)	1049/1207	(87)	1.5	(1.0-2.4)	0.7
Dairy		()		(-)			
Cheese curds	16/434	(4)	33/1272	(3)	1.4	(0.7-2.7)	1.00
Prepared inside the home	8/439	(2)	28/1279	(2)	0.7	(0.3-1.7)	1.00
Cheese other than hard cheese, soft cheese, Mexican-style cheese, or	117/444	(26)	308/1287	(24)	1.2	(0.9-1.6)	1.00
heese curds	,	(20)	000/1201	(= ')		(0.0 1.0)	1.00
Prepared inside the home	84/437	(19)	267/1284	(21)	0.9	(0.7-1.3)	1.00
lard cheese (e.g., gouda, cheddar)	271/443	(61)	824/1274	(65)	0.9	(0.7-1.2)	1.00
Prepared inside the home	173/449	(39)	637/1267	(50)	0.6	(0.5-0.8)	0.00
e cream	202/441	(46)	686/1276	(54)	0.7	(0.5-0.9)	0.07
Prepared inside the home	165/451	(37)	639/1281	(50)	0.6	(0.5-0.8)	0.00
Prepared outside the home	81/440	(18)	219/1274	(17)	1.0	(0.7-1.5)	1.00
•			1046/1284	· · ·	0.5	()	
asteurized milk	325/450	(72)		(81)		(0.4-0.7)	<0.00
Prepared inside the home	308/449	(69)	1025/1287	(80)	0.5	(0.4-0.7)	<0.00
Prepared outside the home	67/448	(15)	248/1282	(19)	0.6	(0.4-0.9)	0.12
ueso fresco or Mexican-style cheese	49/439	(11)	119/1281	(9)	1.4	(0.9-2.1)	1.0
Prepared inside the home	32/439	(7)	80/1288	(6)	1.3	(0.8-2.1)	1.0
w milk	7/431	(2)	5/1270	(0)	3.4	(1.0-12.7)	0.9
Prepared inside the home	7/435	(2)	6/1271	(0)	2.6	(0.8-9.1)	1.0
Prepared outside the home	1/430	(0)	0/1270	(0)	27.0	(0.6-10058.7)	1.0
oft cheese (e.g., feta, brie)	115/440	(26)	350/1275	(27)	0.9	(0.7-1.2)	1.0
Prepared inside the home	80/440	(18)	285/1290	(22)	0.8	(0.6-1.1)	1.0
npasteurized cheese	5/435	(1)	9/1272	(1)	1.3	(0.4-4.7)	1.0
Prepared inside the home	6/437	(1)	5/1273	(0)	3.5	(0.9-15.1)	1.0
Prepared outside the home	0/434	(0)	2/1272	(0)	0.1	(0-7.4)	1.0
gurt	239/437	(55)	748/1279	(58)	1.0	(0.8-1.3)	1.0
Prepared inside the home	239/437	(50)	737/1286	(57)	0.8	(0.6-1.1)	1.0
•				· · ·		· · · ·	
Prepared outside the home	41/437	(9)	84/1289	(7)	1.7	(1.1-2.7)	0.4
uit and Vegetable	=//00	(2)	0//070	(2)			
falfa sprouts	7/433	(2)	6/1273	(0)	3.9	(1.1-14.2)	0.6
Prepared inside the home	6/432	(1)	5/1274	(0)	2.9	(0.8-11.2)	1.0
Prepared outside the home	3/434	(1)	2/1275	(0)	3.5	(0.5-25.6)	1.0
ples	276/443	(62)	903/1276	(71)	0.8	(0.6-1.1)	1.0
Prepared inside the home	246/431	(57)	871/1261	(69)	0.6	(0.4-0.8)	0.00
Prepared outside the home	54/434	(12)	117/1263	(9)	1.4	(0.9-2.2)	1.0
ananas	316/443	(71)	953/1287	(74)	1.1	(0.8-1.4)	1.0
Prepared inside the home	303/447	(68)	916/1272	(72)	1.0	(0.8-1.4)	1.0
Prepared outside the home	37/434	(9)	68/1267	(5) [´]	1.8	(1.1-3.1)	0.4
an sprouts	12/432	(3)	12/1271	(1)	4.2	(1.6-11.1)	0.1
Prepared inside the home	8/432	(2)	9/1272	(1)	4.1	(1.3-12.6)	0.3
leberries	128/445	(29)	377/1280	(29)	1.2	(0.9-1.6)	1.0
Prepared inside the home	114/455	(25)	370/1283	(29)	1.0	(0.7-1.3)	1.0
Prepared outside the home	11/451	(2)	23/1276	(2)	1.5	(0.6-3.5)	1.0
occoli	103/434	(24)	360/1279		1.0	(0.7-1.4)	1.0
				(28)		()	
Prepared inside the home	100/443	(23)	339/1281	(26)	1.0	(0.7-1.3)	1.0
Prepared outside the home	14/429	(3)	54/1279	(4)	0.7	(0.3-1.4)	1.0
bbage	56/445	(13)	145/1280	(11)	1.1	(0.8-1.7)	1.0
Prepared inside the home	38/454	(8)	113/1284	(9)	1.1	(0.7-1.8)	1.0
Prepared outside the home	23/442	(5)	53/1284	(4)	1.3	(0.7-2.2)	1.0
ntaloupe	100/436	(23)	258/1272	(20)	1.6	(1.1-2.2)	0.1
Prepared inside the home	88/442	(20)	257/1281	(20)	1.2	(0.9-1.7)	1.0
Prepared outside the home	18/431	(4)	22/1274	(2)	4.3	(1.9-9.9)	0.0
rrots	217/456	(48)	699/1281	(55)	0.8	(0.6-1.1)	1.0
Prepared inside the home	182/438	(42)	654/1270	(51)	0.7	(0.5-0.9)	0.2
Prepared outside the home	50/456	(11)	93/1278	(7)	1.7	(1.1-2.6)	0.3
lery	93/441	(21)	287/1267	(23)	1.1	(0.8-1.6)	1.0
Prepared inside the home	84/437	(19)	272/1267	(23)	1.2	(0.8-1.6)	1.0
Prepared inside the home	20/436	(13)	30/1271		2.5	(1.3-4.8)	0.2
	20/438 67/443	(5)	149/1281	(2)	2.5 1.8	(1.3-4.6) (1.2-2.6)	0.2
antro Branarad inside the home				(12)			
Prepared inside the home	48/448	(11)	137/1285	(11)	1.2	(0.8-1.9)	1.0
Prepared outside the home	17/444	(4)	23/1282	(2)	3.0	(1.4-6.2)	0.1
rus other than oranges	99/436	(23)	302/1279	(24)	1.1	(0.8-1.5)	1.0
Prepared inside the home	89/462	(19)	287/1282	(22)	0.9	(0.7-1.2)	1.0
Prepared outside the home	20/434	(5)	38/1275	(3)	1.6	(0.8-3.0)	1.0
lcumbers	158/449	(35)	458/1266	(36)	1.2	(0.9-1.7)	1.0
Prepared inside the home	125/435	(29)	418/1261	(33)	1.0	(0.8-1.4)	1.0
Prepared outside the home	43/441	(10)	85/1264	(7)	1.8	(1.1-2.9)	0.3
•	140/444		336/1274		1.0	(1.3-2.3)	0.0
totic fruit (e.g., kiwi, avocado)		(32)		(26)			
Prepared inside the home	124/448	(28)	322/1267	(25)	1.5	(1.1-2.0)	0.1
Prepared outside the home	35/449	(8)	30/1275	(2)	3.9	(2.1-7.1)	<0.0
resh herbs other than parsley or cilantro	35/437	(8)	95/1271	(7)	1.5	(0.9-2.5)	1.0

	Case (n=77		Controls (n=2,365	•	Multivari	able analysis	
Characteristic or exposure [*]	n/N [†]	(%)	n/N [†]	(%) (7)	OR	(95% CI)	P [‡]
Prepared inside the home	29/436	(7)	93/1274		1.3	(0.8-2.1)	1.00
Prepared outside the home	5/434 223/445	(1)	3/1270 701/1276	(0)	6.3 1.0	(1.3-31.5)	0.43
Grapes Prepared inside the home	197/451	(50) (44)	680/1279	(55) (53)	0.8	(0.8-1.3) (0.6-1.0)	0.81
Prepared outside the home	36/443	(8)	70/1266	(6)	1.8	(1.1-3.1)	0.51
Green onions	62/442	(14)	163/1276	(13)	1.5	(1.0-2.2)	1.00
Prepared inside the home	57/453	(13)	152/1272	(12)	1.3	(0.9-1.9)	1.00
Prepared outside the home	22/443	(5)	25/1275	(2)	2.8	(1.4-5.6)	0.09
Homegrown vegetables Honeydew	73/442 30/439	(17)	165/1285 78/1276	(13)	1.5 1.5	(1.0-2.1) (0.9-2.6)	0.51 1.00
Prepared inside the home	23/440	(7) (5)	74/1278	(6) (6)	1.2	(0.7-2.0)	1.00
Prepared outside the home	11/437	(3)	10/1277	(1)	5.2	(1.8-14.9)	0.07
Iceberg lettuce	159/426	(37)	406/1238	(33)	1.6	(1.2-2.2)	0.12
Prepared inside the home	118/425	(28)	355/1239	(29)	1.1	(0.8-1.5)	1.00
Prepared outside the home	86/415	(21)	156/1245	(13)	2.7	(1.8-3.9)	<0.001
Lettuce Lettuce other than iceberg or romaine	288/447	(64)	710/1268	(56)	2.6	(1.8-3.6)	<0.001
Prepared inside the home	34/418	(8)	77/1230	(6)	1.8	(1.0-2.9)	0.6
Prepared outside the home	9/425	(2)	17/1230	(1)	1.7	(0.7-4.4)	1.00
Mixed greens (e.g., spring mix, swiss chard)	69/429	(16)	208/1282	(16)	1.4	(0.9-2.0)	1.00
Prepared inside the home	57/436	(13)	187/1285	(15)	1.1	(0.7-1.7)	1.00
Prepared outside the home	16/428	(4)	41/1282	(3)	1.3	(0.6-2.6)	1.00
Onions other than white or red	161/453	(36)	438/1267	(35)	1.5	(1.1-2.0)	0.21
Prepared inside the home	123/438	(28)	403/1260	(32)	1.0	(0.8-1.4)	1.00
Prepared outside the home	54/438 144/438	(12) (33)	87/1260 476/1272	(7) (37)	2.5 1.0	(1.6-4.0) (0.7-1.3)	0.006
Oranges Prepared inside the home	124/444	(28)	459/1272	(36)	0.8	(0.6-1.1)	1.00
Prepared outside the home	19/436	(4)	53/1273	(4)	1.2	(0.6-2.2)	1.00
Organic produce	105/439	(24)	284/1280	(22)	1.5	(1.1-2.0)	0.23
Other fruit (not citrus, pears, apples, tree fruit, strawberries, raspberries, grapes, bananas, cantaloupe, watermelon, honeydew, pineapple, or	29/445	(7)	52/1280	(4)	1.9	(1.1-3.2)	0.46
exotic fruit) Prepared inside the home	25/448	(6)	54/1278	(4)	1.6	(0.9-2.7)	1.00
Prepared outside the home	4/441	(1)	3/1279	(0)	4.4	(0.8-23.8)	1.00
Parsley	37/441	(8)	79/1275	(6)	2.3	(1.3-3.8)	0.09
Prepared inside the home	34/438	(8)	77/1278	(6)	2.2	(1.3-3.8)	0.1
Prepared outside the home	4/445	(1)	8/1268	(1)	1.5	(0.4-5.3)	1.00
Pea pods	25/443	(6)	106/1273	(8)	0.6	(0.4-1.1)	1.00
Prepared inside the home	24/443	(5)	108/1280	(8)	0.7	(0.4-1.1)	1.00
Prepared outside the home	4/445	(1)	9/1273	(1)	0.9	(0.2-3.4)	1.00
Pears	54/439	(12)	241/1268	(19)	0.6	(0.4-0.9)	0.17
Prepared inside the home	50/443	(11)	246/1278	(19)	0.5	(0.4-0.8)	0.02
Prepared outside the home	6/436	(1)	18/1268	(1)	1.3	(0.4-3.9)	1.00
Peppers	117/439	(27)	370/1277	(29)	1.3	(1.0-1.8)	1.00
Prepared inside the home	102/450	(23)	352/1276	(28)	0.9	(0.7-1.3)	1.00
Prepared outside the home	41/440	(9)	56/1274	(4)	3.0	(1.8-5.0)	0.002
Pineapple	98/449	(22)	221/1279	(17)	1.8	(1.3-2.6)	0.02
Prepared inside the home	80/446	(18)	206/1275	(16)	1.4	(1.0-2.0)	0.84
Prepared outside the home	23/440	(5)	29/1274	(2)	3.6	(1.8-7.1)	0.02
Prepackaged iceberg lettuce	73/371	(20)	212/1145	(19)	1.3	(0.9-1.9)	1.00
Prepackaged lettuce other than iceberg or romaine	22/418	(5)	42/1220	(3)	1.9	(1.0-3.5)	0.7
Prepackaged mixed greens (e.g., spring mix, swiss chard)	49/424	(12)	157/1253	(13)	1.2	(0.8-1.9)	1.00
Prepackaged raw spinach	60/432	(14)	184/1232	(15)	1.1	(0.8-1.6)	1.00
Prepackaged romaine	76/379	(20)	220/1145	(19)	1.3	(0.9-1.9)	1.00
Radishes	23/437	(5)	59/1277	(5)	1.4	(0.7-2.5)	1.00
Prepared inside the home	20/440	(5)	58/1279	(5)	1.2	(0.6-2.2)	1.00
Prepared outside the home	6/438	(1)	8/1279	(1)	2.0	(0.6-6.8)	1.00
Raspberries	81/437	(19)	249/1271	(20)	1.3	(0.9-1.8)	1.00
Prepared inside the home	76/439	(17)	260/1284	(20)	1.1	(0.8-1.5)	1.00
Prepared outside the home	11/432	(3)	10/1270	(1)	7.7	(2.4-27.5)	0.03
Raw spinach	92/441		243/1279	(19)	1.8	(1.2-2.5)	0.08
Prepared inside the home	74/451	(16)	223/1280	(17)	1.3	(0.9-1.8)	1.00
Prepared outside the home	30/445	(7)	44/1286	(3)	2.9	(1.7-5.2)	0.02
Romaine lettuce	131/427	(31)	369/1228	(30)	1.4	(1.0-1.9)	1.00
Prepared inside the home	105/425	(25)	338/1219	(28)	1.1	(0.8-1.5)	1.00
Prepared outside the home	51/431	(12)	95/1227	(8)	2.2	(1.4-3.4)	0.03
Salsa Prepared inside the home	71/442	(16)	137/1275	(11)	1.9	(1.3-2.8)	0.04
	41/452	(9)	109/1276	(9)	1.3	(0.8-2.0)	1.00
Prepared outside the home	37/449 3/429	(8)	53/1277	(4)	2.1	(1.3-3.3)	0.12
Sprouts other than alfalfa or bean	3/428	(1)	6/1270	(0)	1.4	(0.3-5.9)	1.00
Prepared inside the home		(1)	6/1270	(0)	1.4	(0.3-5.9)	1.00
Strawberries Prepared inside the home	227/434	(52)	628/1269	(49)	1.5	(1.2-2.0)	0.1
	218/438	(50)	602/1265	(48)	1.4	(1.0-1.8)	0.47
Prepared outside the home	31/421	(7)	56/1265	(4)	2.2	(1.2-3.8)	0.17
Tomatoes	227/435		605/1265	(48)	1.7	(1.3-2.3)	0.03
Prepared inside the home	180/427	(42)	536/1253	(43)	1.3	(1.0-1.7)	1.00
Prepared outside the home	101/443	(23)	175/1266	(14)	2.5	(1.8-3.5)	<0.001
Tree fruit other than citrus, pears, or apples (e.g., apricot, nectarine,	101/447	(23)	274/1286	(21)	1.3	(1.0-1.8)	1.00
peach, plum) Prepared inside the home	88/447	(20)	268/1288	(21)	1.2	(0.8-1.6)	1.00
Prepared outside the home	9/447	(2)	22/1284	(2)	0.9	(0.4-2.1)	1.00
Unpasteurized apple cider or juice	8/434	(2)	8/1270	(1)	3.0	(1.0-9.1)	0.84
Unpasteurized juice other than apple cider or apple juice	7/431	(2)	8/1270	(1)	2.5	(0.8-8.2)	1.00
Watermelon	145/448	(32)	302/1276	(24)	2.4	(1.8-3.4)	<0.001
Prepared inside the home	120/445	(27)	291/1274	(23)	1.7	(1.2-2.3)	0.03
Prepared outside the home Other	22/446	(5)	34/1270	(3)	2.7	(1.3-5.5)	0.16
Antibiotics prior to illness	35/438	(8)	83/1265	(7)	1.3	(0.8-2.0)	1.00
Attend childcare setting or center	43/432	(10)	167/1251	(13)	0.7	(0.5-1.0)	1.00
Attend, work, or voluneer at a childcare center	63/438	(14)	198/1259	(16)	0.9	(0.6-1.2)	1.00
Children under 5 years of age in household	121/445	(27)	381/1253	(30)	0.8	(0.6-1.1)	1.00
Contact with someone with diarrheal illness	56/408	(14)	55/1153	(5)	3.6	(2.2-5.7)	<0.001
Eat at a fast-food restaurant	245/434	(56)	580/1278	(45)	1.7	(1.3-2.2)	0.02
Eat at a table service restaurant	207/454	(46)	425/1276	(33)	1.7	(1.3-2.3)	0.002
Live, work, or visit residential facility (e.g., nursing home, hospital)	55/446	(12)	100/1274	(8)	1.6	(1.1-2.4)	0.4
Stomach acid-reducing medications in 4 weeks before illness	93/430	(22)	174/1261	(14)	2.1	(1.5-2.9)	<0.001
Travel in state of residence	133/439	(30)	317/1261	(25)	1.4	(1.0-1.8)	0.47
Travel outside state of residence	63/447	(14)	113/1262	(9)	1.6	(1.1-2.3)	0.43
Meat, Poultry, Pork, and Seafood		. ,					
Beef	318/435	(73)	911/1264	(72)	1.0	(0.7-1.5)	1.00
Prepared at home	240/437	(55)	827/1257	(66)	0.6	(0.4-0.8)	0.004
Prepared at table service restaurant	85/443	(19)	135/1258	(11)	2.1	(1.5-3.0)	0.003
Bison	7/434	(2)	6/1265	(0)	5.5	(1.7-18.3)	0.15
Prepared inside the home Prepared outside the home	4/433 2/431	(1)	7/1266 1/1263	(1)	2.2 7.4	(0.5-7.9) (0.7-104.0)	1.00
Chicken	364/431	(0) (84)	1045/1272	(0) (82)	1.5	`(1.0-2.2)´	0.63
Prepared inside the home	303/445	(68)	955/1269	(75)	0.8	(0.6-1.0)	1.00
Prepared outside the home	203/446	(46)	465/1269	(37)	1.6	(1.2-2.0)	0.04
Elk	9/433	(2)	5/1268	(0)	6.2	(1.9-22.5)	0.09
Prepared inside the home	7/431	(2)	5/1266	(0)	4.1	(1.2-14.6)	0.48
Prepared outside the home	2/431	(0)	0/1267	(0)	18.0	(0.8-2072.8)	1.00
Goat	8/436	(2)	5/1267	(0)	5.3	(1.5-20.1)	0.2
Prepared inside the home	5/431	(1)	5/1266	(0)	3.4	(0.8-14.4)	1.00
Prepared outside the home	2/432	(0)	1/1266	(0)	6.9	(0.7-96.3)	1.00

	Cases (n=77		Control (n=2,36		Multiver	able analysis	
aracteristic or exposure [*]		<u>(%)</u>	n/N [†]	(%)	OR	(95% CI)	
ound beef at a fast-food restaurant		(29)	309/1247	(25)	1.2	(0.9-1.6)	
Prepared at a fast-food restaurant	- 104/431	(23)	- 287/1256	(23)	- 0.9	(0.3-1.3)	- 1.00
Prepared at home	141/445	(32)	550/1281	(43)	0.5	(0.4-0.7)	<0.001
Prepared at a table service restaurant	44/445	(10)	73/1276	(6)	2.4	(1.5-3.8)	0.01
ound beef other than hamburgers	144/445	(32)	555/1282	(43)	0.6	(0.4-0.7)	0.002
Prepared at a fast-food restaurant	45/425	(11)	111/1255	(9)	1.3	(0.8-2.0)	1.00
indled meat (e.g., beef, pork, poultry, or fish) in past 3 months	428/436	(98)	1216/1265	(96)	2.3	(1.0-5.7)	0.78
usehold member handled raw beef in past 3 months	54/437 187/439	(12)	208/1283	(16)	0.7	(0.5-1.0)	0.64
busehold member handled raw ground beef in past 3 months	87/457	(43) (19)	646/1276 318/1280	(51) (25)	0.7 0.7	(0.5-0.9) (0.5-1.0)	0.09 0.81
act cut of beef other than steak	49/456	(11)	203/1270	(16)	0.6	(0.4-0.8)	0.12
prepared at table service restaurant	14/453	(3)	18/1271	(1)	1.9	(0.9-4.2)	1.00
rky	47/435 28/432	(11)	73/1273 48/1274	(6)	2.1 1.7	(1.4-3.4)	0.05 1.00
Prepared inside the home Prepared outside the home	18/441	(6) (4)	37/1273	(4) (3)	1.1	(1.0-2.9) (0.6-2.1)	1.00
nb	11/435	(3)	21/1270	(2)	1.4	(0.6-3.2)	1.00
Prepared inside the home	4/433	(1)	12/1270	(1)	1.2	(0.3-4.1)	1.00
Prepared outside the home	8/428	(2)	11/1271	(1)	1.7	(0.6-4.8)	1.00
janic meat	49/436	(11)	191/1280	(15)	0.8	(0.5-1.1)	1.00
her meat, poultry, or fish (not chicken, turkey, pork, lamb, veal, jerky,	82/449	(18)	189/1280	(15)	1.2	(0.9-1.7)	1.00
ison, elk, goat, bison, salami, pepperoni, summer sausage, shrimp, Ilfish, or raw fish/sushi)							
Prepared inside the home	57/447	(13)	180/1284	(14)	0.9	(0.6-1.2)	1.00
Prepared outside the home	22/444	(5)	33/1279	(3)	1.5	(0.8-2.7)	1.00
operoni Prepared inside the home	149/443 63/442	(34)	425/1282 254/1278	(33)	0.9 0.6	(0.7-1.2) (0.4-0.9)	1.00 0.1
Prepared outside the home	99/444	(14) (22)	229/1284	(20) (18)	1.3	(0.4-0.9) (0.9-1.8)	1.00
< ground beef hamburger	-	(2)	-	-	-	-	-
Prepared at a fast-food restaurant	7/425		11/1235	(1)	1.7	(0.6-5.0)	1.00
Prepared at a table service restaurant	17/443	(4)	7/1280	(1)	9.0	(3.5-24.7́)	<0.001
Prepared inside the home	21/439	(5)	86/1265	(7)	0.7	(0.4-1.1)	1.00
k ground beef other than hamburger	12/436	(3)	41/1267	(3)	0.8	(0.4-1.5)	1.00
Prepared at a fast-food restaurant	2/418	(0)	1/1240	(0)	7.0	(0.7-97.5)	1.00
k intact cut of beef	4/455	(1)	26/1268	(2)	0.4	(0.1-1.2)	1.00
k pre-made frozen hamburger patties	4/443	(1)	23/1262	(2)	0.4	(0.1-1.2)	1.00
k steak	35/443	(8)	157/1274	(12)	0.6	(0.4-0.9)	0.37
Prepared at a table service restaurant	11/439	(3)	27/1278	(2)	1.5	(0.7-3.2)	1.00
k	189/447	(42)	471/1273	(37)	1.3	(1.0-1.7)	0.75
Prepared inside the home	139/447	(31)	434/1265	(34)	0.9	(0.7-1.1)	1.00
Prepared outside the home	71/450	(16)	86/1276	(7)	2.9	(1.9-4.2)	<0.001
made frozen hamburger patties	35/446	(8)	162/1269	(13)	0.6	(0.4-0.9)	0.17
w fish or sushi Prepared inside the home	25/440 2/433	(6)	25/1269	(2)	3.0 1.8	(1.5-5.9)	0.07
Prepared outside the home	24/435	(0) (6)	6/1270 22/1270	(0) (2)	3.1	(0.3-8.7) (1.6-6.3)	1.00 0.05
ami	38/441	(9)	102/1265	(8)	1.0	(0.6-1.6)	1.00
Prepared inside the home	22/433	(5)	87/1269	(7)	0.8	(0.4-1.3)	1.00
Prepared outside the home	15/437	(3)	28/1263	(2)	1.7	(0.8-3.4)	1.00
usage other than summer sausage	85/440	(19)	240/1281	(19)	0.9	(0.7-1.3)	1.00
Prepared inside the home	67/448	(15)	209/1283	(16)	0.9	(0.6-1.2)	1.00
Prepared outside the home	25/432	(6)	46/1277	(4)	1.5	(0.8-2.6)	1.00
ellfish	25/431	(6)	40/1274	(3)	2.2	(1.2-4.0)	0.23
Prepared inside the home	6/426	(1)	26/1275	(2)	0.8	(0.3-2.0)	1.00
Prepared outside the home	20/433	(5)	21/1273	(2)	3.1	(1.5-6.4)	0.08
imp	73/441	(17)	174/1279	(14)	1.3	(0.9-1.9)	1.00
Prepared inside the home	37/435	(9)	134/1280	(10)	0.9	(0.6-1.3)	1.00
Prepared outside the home	38/432	(9)	63/1277	(5)	2.2	(1.3-3.5)	0.08
ak	89/432	(21)	304/1274	(24)	0.9	(0.7-1.3)	1.00
Prepared at a table service restaurant	24/443	(5)	54/1277	(4)	1.3	(0.7-2.3)	1.00
mmer sausage	24/435	(6)	76/1270	(6)	0.9	(0.5-1.6)	1.00
Prepared inside the home	21/444	(5)	62/1272	(5)	0.9	(0.5-1.6)	1.00
Prepared outside the home	2/429	(0)	19/1266	(2)	0.2	(0-0.9)	0.55
key	119/442	(27)	306/1278	(24)	1.3	(0.9-1.7)	1.00
Prepared inside the home	103/436	(24)	281/1284	(22)	1.2	(0.9-1.5)	1.00
Prepared outside the home	29/437	(7) [′]	59/1275	(5)	1.3	(0.8-2.1)	1.00
al	3/435	(1)	7/1265	(1)	1.7	(0.4-7.1)	1.00
Prepared inside the home	2/428	(O)	6/1263	(O)	1.4	(0.2-7.1)	1.00
Prepared outside the home	1/432	(0)	2/1265	(0)	2.2	(0.2-22.5)	1.00
nison	29/435	(7)	58/1270	(5)	1.4	(0.8-2.4)	1.00
Prepared inside the home	29/426	(7)	58/1267	(5)	1.5	(0.9-2.4)	1.00
Prepared outside the home	2/432	(0)	3/1269	(0)	2.6	(0.3-17.6)	1.00
vironmental						, , , , , , , , , , , , , , , , , , ,	
mping	32/441	(7)	31/1268	(2)	3.2	(1.8-5.7)	0.006
mpost in past 12 months	19/418	(5)	37/1234	(3)	1.7	(0.9-3.2)	1.00
ntact with animal-based dog treats (e.g., rawhides, pig's ear)	42/419	(10)	113/1231	(9)	1.0	(0.6-1.5)	1.00
ntact with animals	327/437	(75)	895/1261	(71)	1.2	(0.9-1.6)	1.00
ntact with any wild animals or their droppings	34/412	(8)	58/1215	(5)	1.7	(1.0-2.7)	0.84
ntact with bird feed	9/437	(2)	18/1256	(1)	1.5	(0.6-3.6)	1.00
ntact with birds	16/438	(4)	30/1257	(2)	1.2	(0.6-2.5)	1.00
ntact with cat food	72/443	(16)	243/1254	(19)	0.7	(0.5-1.0)	1.00
ntact with cats	131/438	(30)	374/1258	(30)	0.9	(0.7-1.2)	1.00
ntact with chicken feed	12/431	(3)	8/1255	(1)	5.1	(1.9-14.2)	0.06
ntact with chickens	15/433	(3)	19/1256	(2)	2.1	(0.9-4.7)	
ntact with dog food	157/441	(36)	493/1250	(39)	0.8	(0.6-1.1)	1.00
ntact with dogs	271/438	(62)	727/1264	(58)	1.3	(1.0-1.6)	1.00
ntact with fish	23/437	(5)	82/1252	(7)	0.8	(0.5-1.3)	1.00
ntact with fish food	16/442	(4)	52/1255	(4)	0.9	(0.5-1.7)	1.00
ntact with goats	9/438	(2)	3/1255	(0)	21.2	(4.3-145.7)	0.005
ntact with reptile or amphibian food	5/438	(1)	17/1257	(1)	0.5	(0.2-1.5)	1.00
ntact with reptiles or amphibians	19/436	(4)	31/1255	(2)	1.5	(0.8-2.9)	1.00
ntact with wild animals other than deer and elk or their droppings	18/407	(4)	39/1219	(3)	1.5	(0.8-2.9)	1.00
ntact with wild deer or elk or their droppings	20/406	(5)	13/1214	(1)	4.7	(2.2-10.4)	0.006
isehold member visited/worked on farm with animals	43/435	(10)	49/1254	(4)	3.5	(2.1-5.9)	<0.001
sehold member visited/worked on farm with cows	22/431	(5)	19/1248	(2)	5.1	(2.4-11.3)	0.002
sehold member visited/worked on farm with sheep	7/433	(2)	8/1247	(1)	4.2	(1.1-15.8)	0.6
on a farm	28/444	(6)	23/1277	(2)	5.6	(2.6-12.2)	<0.001
nd have contact with calves feed	2/450	(0)	1/1271	(0)	4.2	(0.4-60)	1.00
nd have contact with cattle feed	1/447	(0)	2/1269		0.7	(0-8.3)	1.00
nd have contact with cattle living area or manure	4/447	(1)	2/1269	(0) (0)	7.5	(1.1-75.1)	0.68
nd have contact with cows	5/450	(1)	4/1263	(0)	6.2	(1.2-36.2)	0.49
/ith calves present	6/452	(1)	5/1272	(0)	5.4	(1.3-25.7)	0.43
Vith chickens present	11/443	(2)	2/1274	(0)	28.1	(6.5-178.6)	<0.001
Vith cows present	8/447	(2)	16/1273	(1)	1.4	(0.5-3.5)	1.00
Vith horses present	9/447	(2)	7/1278	(1)	3.2	(1.0-10.5)	0.74
Nith pigs present	3/443	(1)	0/1274	(0)	66.9	(4.7-9270.2)	0.05
Nith sheep present	3/442	(1)	1/1277	(0)	3.6	(0.4-42.9)	1.00
e on, visit, or work on a farm, petting zoo, or fair And have contact with calves	72/430 9/430	(17)	61/1258 4/1242	(5) (0)	8.0 11.8	(4.7-14.1)	<0.001 0.02
And have contact with chickens	17/428	(2) (4)	19/1241	(2)	2.9	(2.9-59) (1.3-6.5)	0.22
And have contact with cows	13/435	(3)	7/1244	(1)	8.7	(2.7-32.9)	0.01
	19/423	(4)	6/1246	(0)	18.8	(5.8-70.6)	<0.001
And have contact with cows or calves	10/420			1-1		· · · · · · · · · · · · · · · · · · ·	
And have contact with cows or calves With calves present With chickens present	21/424 27/430	(5) (6)	9/1250 9/1255	(1) (1)	23.3 26.1	(7.4-88.9) (9.1-87.2)	<0.001 <0.001

	Cases†		Control				
_	(n=77		(n=2,36			iable analysis	
Characteristic or exposure	n/N [†]	(%)	n/N [†]	(%)	OR	(95% CI)	P [‡]
With cows present	40/429	(9)	29/1257	(2)	6.8	(3.5-13.5)	< 0.001
With deer present	3/432	(1)	2/1249	(0)	4.1	(0.6-30.4)	1.00
With goats present	21/435	(5)	8/1250	(1)	15.7	(5.3-52.8)	<0.001
With horses present	22/429 12/429	(5)	17/1256 6/1252	(1)	3.9	(1.6-9.6)	0.07 0.008
With pigs present	12/429	(3)	7/1249	(0)	13.6 13.2	(3.5-65)	0.008
With sheep present	2/428	(3)	4/1254	(1)		(3.9-51.4)	1.002
With turkeys present Use animal manure in garden in past 12 months	13/418	(0) (3)	19/1227	(0) (2)	0.4 2.5	(0-3.2) (1.1-5.6)	0.48
Use compost or animal manure in garden in past 12 months	28/425	(7)	41/1233	(2)	2.5	(1.4-4.5)	0.48
Use prepackaged compost or manure in garden in past 12 months	15/420	(4)	29/1232	(2)	1.8	(0.9-3.6)	1.00
Visit a fair	11/439	(3)	11/1272	(1)	3.8	(0.9-15.3)	0.93
Visit a farm	40/434	(9)	25/1271	(2)	9.0	(4.6-17.9)	< 0.001
And have contact with cattle feed	6/431	(1)	1/1262	(0)	12.9	(2.3-98.9)	0.1
And have contact with chicken living area or manure	3/431	(1)	1/1268	(0)	14.5	(1.8-165.9)	0.26
And have contact with cow living area or manure	7/431	(2)	4/1263	(0)	5.4	(1.3-24.1)	0.37
And have contact with horse feed	5/438	(1)	2/1269	(0)	20.9	(3.6-185.6)	0.03
And have contact with horse living area or manure	6/439	(1)	4/1270	(0)	7.5	(1.8-34)	0.15
With calves present	10/436	(2)	5/1264	(0)	9.4	(2.6-38.9)	0.03
With chickens present	12/430	(3)	5/1270	(0)	10.0	(3.4-31.2)	0.002
With cows present	21/436	(5)	9/1262	(1)	7.7	(3.2-19.5)	< 0.001
With horses present	12/434	(3)	5/1269	(O)	12.8	(4-46.6)	< 0.001
With sheep present	7/427	(2)	1/1262	(0)	19.7	(3.7-138.7)	0.02
With turkeys present	0/434	(O)	2/1266	(0)	0.1	(0-3.0)	1.00
Visit a petting zoo	7/440	(2)	9/1270	(1)	1.6	(0.4-5.5)	1.00
With cows present	3/451	(1)	3/1262	(0)	4.0	(0.5-34.5)	1.00
With goats present	3/433	(1)	5/1266	(O)	1.7	(0.3-8.5)	1.00
With horses present	1/437	(O)	2/1267	(O)	1.0	(Ò.1-11.7́)	1.00
Work resulted in contact with live animals or carcasses (e.g.,	4/429	(1)	7/1258	(1)	2.0	(0.5-7.4)	1.00
veterinarian, food production)				. ,		, , , , , , , , , , , , , , , , , , ,	
Work, play, or help in garden	75/428	(18)	189/1241	(15)	1.3	(0.9-1.8)	1.00
Water		. ,				, ,	
Cattle near well at home	5/423	(1)	3/1254	(0)	4.2	(0.8-24.9)	1.00
Drink bottled water	308/414	(74)	887/1224	(72)	1.2	(0.9-1.5)	1.00
Drink untreated water (e.g., lake, spring, or river)	18/434	(4)	9/1252	(1)	6.6	(2.8-16.1)	0.001
Swallow water	-	-	-	-	-	-	-
At water park	9/432	(2)	9/1250	(1)	4.6	(1.5-14.1)	0.19
From lake	30/433	(7)	35/1238	(3)	3.0	(1.7-5.3)	0.02
From ocean	5/433	(1)	11/1252	(1)	1.5	(0.4-4.9)	1.00
From pool	52/427	(12)	168/1257	(13)	0.9	(0.6-1.3)	1.00
From splash pad or fountain	4/433	(1)	13/1247	(1)	0.8	(0.2-2.5)	1.00
From wading pool	8/425	(2)	20/1245	(2)	1.1	(0.4-2.6)	1.00
Swim or play	-	-	-	-	-	-	-
In irrigation ditch	3/433	(1)	1/1254	(0)	6.1	(0.6-87.1)	1.00
In lake, river, or stream	41/432	(9)	53/1249	(4)	2.5	(1.5-4.2)	0.02
In lake, river, or stream with nearby cattle	2/424	(0)	0/1237	(0)	13.4	(0.5-1277.8)	1.00
In ocean	7/436	(2)	15/1253	(1)	1.5	(0.5-4.0)	1.00
In pool	64/442	(14)	186/1257	(15)	0.8	(0.6-1.2)	1.00
In splash pad or fountain	7/431	(2)	18/1251	(1)	1.0	(0.4-2.4)	1.00
In wading pool	11/437	(3)	33/1251	(3)	0.8	(0.4-1.8)	1.00
In water	112/438	(26)	234/1253	(19)	1.5	(1.1-2.1)	0.33
In water park	12/436	(3)	10/1251	(1)	4.2	(1.5-11.7)	0.15
Treatment for well water at home other than with a whole-house point-of-	15/413	(4)	55/1236	(4)	0.7	(0.3-1.2)	1.00
entry device	004/440		000/4007	(70)	4.0	$(0, \overline{2}, 4, 0)$	4.00
Use municipal water at home	334/446	(75)	963/1267	(76)	1.0	(0.7-1.3)	1.00
Use municipal water away from home	225/395	(57)	661/1167	(57)	1.1	(0.8-1.4)	1.00
Use private well water at home	76/429	(18)	193/1267	(15)	1.2	(0.8-1.7)	1.00
Use private well water away from home	29/366	(8)	65/1067	(6)	1.3	(0.7-2.1)	1.00
Use spring water at home	2/436	(0)	9/1246	(1)	1.4	(0.2-5.4)	1.00
Use spring water away from home	3/358	(1)	11/1045	(1)	0.8	(0.2-3.0)	1.00
Whole house point-of-entry treatment for well water at home	19/413	(5)	51/1229	(4)	1.5	(0.8-2.7)	1.00

 While nouse point-of-entry treatment for well water at nome
 19/413
 (5)
 51/1229
 (4)
 1.5
 (0.8-2.7)
 1.00

 *In the 7 days before illness began unless otherwise specified. Only exposures with sufficient sample sizes for analysis after nearest-neighbors matching are listed. Interviewers told respondents to consider foods prepared at any home to be prepared at an estaurant or commercial food service establishment to be prepared outside the home.
 1.00

 *The initial sample for each exposure was 774 non-infant non-traveler cases and 2,365 non-infant non-traveler controls. During nearest-neighbors matching, cases and controls without a match were excluded for the exposure under consideration. Thus, the numbers (i.e., N in the table) of cases and controls that were matched and included in the analysis for each exposure is smaller than the total. Number of exposed is denoted by n.
 ‡P is adjusted for multiple testing using the Benjamini-Hochberg-Yekutieli method

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