

Appendix

for

State Estimates for the Annual Cost of Foodborne Illness

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This appendix provides state specific estimates for the health costs associated with 30 identified foodborne illnesses, as well as costs associated with unspecified illnesses. For detailed descriptions of what these measures represent and how they were measured, please refer to the main article, “State Estimates for the Annual Cost of Foodborne Illness,” in *Journal of Food Protection*.

TABLE A1. *Alabama Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.14	0.23	0.03	0.05	147	239
<i>Brucella</i> spp.	0.01	0.11	0.15	0.02	0.03	15,973	21,605
<i>Campylobacter</i> spp.	26.73	21.83	113.03	4.52	23.38	1,690	8,748
<i>Clostridium botulinum</i>	<0.01	1.07	1.37	0.22	0.28	1,267,196	1,615,578
<i>Clostridium perfringens</i>	30.56	5.28	7.00	1.09	1.45	358	474
STEC O157:H7	1.37	6.34	6.74	1.31	1.39	9,540	10,142
STEC non-0157	2.45	0.91	1.66	0.19	0.34	770	1,402
ETEC	0.57	0.20	0.37	0.04	0.08	727	1,359
Other diarrheogenic <i>E. coli</i> ,	0.38	0.13	0.25	0.03	0.05	726	1,360
<i>Listeria monocytogenes</i>	0.03	19.42	19.65	4.02	4.06	1,198,500	1,212,412
<i>Salmonella</i> , Nontyphoidal	42.15	81.42	237.10	16.84	49.05	3,996	11,637
<i>S. enterica</i> serotype Typhi	0.02	0.03	0.09	0.01	0.02	3,994	12,196
<i>Shigella</i> , spp	5.97	5.05	29.69	1.05	6.14	1,752	10,297
<i>Staphylococcus aureus</i>	7.63	1.82	2.60	0.38	0.54	495	705
Streptococcus spp. Group A	0.36	0.19	0.37	0.04	0.08	1,124	2,154
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,323	2,299
<i>Vibrio vulnificus</i>	<0.01	4.58	4.58	0.95	0.95	2,613,528	2,615,295
<i>Vibrio parahaemolyticus</i>	1.31	1.10	1.60	0.23	0.33	1,733	2,532
<i>Vibrio</i> spp., other	0.66	1.29	1.55	0.27	0.32	4,035	4,833
<i>Yersinia enterocolitica</i>	3.09	5.54	17.70	1.15	3.66	3,710	11,857
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.46	1.25	2.07	0.26	0.43	1,779	2,933
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	805	1,510
<i>Giardia intestinalis</i>	1.56	1.53	2.80	0.32	0.58	2,025	3,722
<i>Toxoplasma gondii</i>	2.74	44.97	51.99	9.30	10.76	33,929	39,224
<i>Trichinella</i> spp.	<0.01	0.02	0.04	<0.01	0.01	8,015	15,426
<u>Viral</u>							
Astrovirus	0.49	0.17	0.30	0.03	0.06	716	1,281
Hepatitis A virus	0.02	0.26	0.28	0.05	0.06	33,649	35,199
Norovirus	172.77	40.57	56.64	8.39	11.72	486	678
Rotavirus	0.49	0.18	0.29	0.04	0.06	747	1,220
Sapovirus	0.49	0.14	0.25	0.03	0.05	597	1,078
Known		245.55	560.39	50.80	115.93	1,664	3,797
Unknown	1,214.46	466.59	692.87	96.53	143.34	795	1,180
Total		712.14	1,253.26	147.33	259.27	969	1,706

¹Incidence per 10,000 residents.

TABLE A2. *Alaska Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.03	0.05	0.04	0.07	208	339
<i>Brucella</i> spp.	0.03	0.05	0.06	0.06	0.08	22,063	30,116
<i>Campylobacter</i> spp.	26.73	4.67	24.66	6.35	33.54	2,377	12,547
<i>Clostridium botulinum</i>	<0.01	0.23	0.29	0.31	0.40	1,784,957	2,287,041
<i>Clostridium perfringens</i>	30.56	1.15	1.52	1.57	2.07	512	679
STEC O157:H7	0.63	0.62	0.66	0.85	0.90	13,469	14,326
STEC non-0157	1.12	0.09	0.17	0.12	0.23	1,105	2,007
ETEC	0.57	0.04	0.08	0.06	0.11	1,058	1,960
Other diarrheogenic <i>E. coli</i> ,	0.38	0.03	0.05	0.04	0.07	1,058	1,962
<i>Listeria monocytogenes</i>	0.02	2.65	2.68	3.61	3.65	1,703,437	1,722,528
<i>Salmonella</i> , spp., Nontyphoidal	21.14	8.75	25.85	11.90	35.17	5,632	16,638
<i>S. enterica</i> serotype Typhi	0.01	<0.01	0.01	0.01	0.02	4,896	16,705
<i>Shigella</i> , spp	0.63	0.12	0.69	0.16	0.93	2,488	14,799
<i>Staphylococcus aureus</i>	7.63	0.39	0.56	0.53	0.76	695	994
Streptococcus spp. Group A	0.36	0.04	0.08	0.06	0.11	1,651	3,119
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,852	3,243
<i>Vibrio vulnificus</i>	<0.01	0.43	0.43	0.58	0.58	3,751,798	3,754,325
<i>Vibrio parahaemolyticus</i>	0.56	0.10	0.15	0.14	0.20	2,501	3,640
<i>Vibrio</i> spp., other	0.28	0.12	0.15	0.17	0.20	5,822	6,960
<i>Yersinia enterocolitica</i>	3.09	1.22	3.88	1.66	5.28	5,365	17,093
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.51	0.10	0.16	0.13	0.21	2,577	4,223
<i>Cyclospora cayetanensis</i>	0.09	0.01	0.01	0.01	0.02	1,173	2,178
<i>Giardia intestinalis</i>	4.87	1.06	1.92	1.44	2.62	2,957	5,377
<i>Toxoplasma gondii</i>	2.74	9.62	11.14	13.08	15.16	47,709	55,280
<i>Trichinella</i> spp.	<0.01	<0.01	0.01	0.01	0.01	11,520	22,100
<u>Viral</u>							
Astrovirus	0.49	0.04	0.07	0.05	0.09	1,017	1,823
Hepatitis A virus	0.03	0.10	0.10	0.13	0.14	48,073	50,284
Norovirus	172.77	8.67	12.15	11.79	16.53	682	957
Rotavirus	0.49	0.04	0.06	0.05	0.08	1,016	1,691
Sapovirus	0.49	0.03	0.06	0.04	0.08	854	1,540
Known		40.39	87.72	54.95	119.32	1,975	4,289
Unknown	1,214.46	101.37	150.46	137.89	204.67	1,135	1,685
Total		141.77	238.18	192.84	323.99	1,292	2,171

¹Incidence per 10,000 residents.

TABLE A3. *Arizona Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.21	0.34	0.03	0.05	161	258
<i>Brucella</i> spp.	0.05	0.54	0.73	0.08	0.11	17,581	23,574
<i>Campylobacter</i> spp.	26.73	32.94	167.52	4.97	25.28	1,860	9,457
<i>Clostridium botulinum</i>	<0.01	1.60	2.03	0.24	0.31	1,375,347	1,750,482
<i>Clostridium perfringens</i>	30.56	7.89	10.39	1.19	1.57	390	513
STEC O157:H7	1.77	12.15	12.90	1.83	1.95	10,363	11,000
STEC non-0157	3.16	1.79	3.20	0.27	0.48	857	1,527
ETEC	0.57	0.30	0.55	0.05	0.08	808	1,478
Other diarrheogenic <i>E. coli</i> ,	0.38	0.20	0.37	0.03	0.06	807	1,479
<i>Listeria monocytogenes</i>	0.03	28.36	28.67	4.28	4.33	1,298,210	1,312,116
<i>Salmonella</i> , spp., Nontyphoidal	29.36	85.04	245.00	12.83	36.97	4,371	12,593
<i>S. enterica</i> serotype Typhi	0.03	0.08	0.25	0.01	0.04	4,510	13,329
<i>Shigella</i> , spp	6.39	8.20	47.15	1.24	7.12	1,936	11,133
<i>Staphylococcus aureus</i>	7.63	2.75	3.87	0.41	0.58	544	766
Streptococcus spp. Group A	0.36	0.29	0.55	0.04	0.08	1,250	2,342
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,477	2,511
<i>Vibrio vulnificus</i>	<0.01	6.28	6.29	0.95	0.95	2,821,931	2,823,812
<i>Vibrio parahaemolyticus</i>	1.21	1.53	2.21	0.23	0.33	1,902	2,748
<i>Vibrio</i> spp., other	0.61	1.79	2.13	0.27	0.32	4,385	5,231
<i>Yersinia enterocolitica</i>	3.09	8.31	26.24	1.25	3.96	4,061	12,820
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.45	0.58	0.95	0.09	0.14	1,966	3,189
<i>Cyclospora cayetanensis</i>	0.01	0.01	0.01	<0.01	<0.01	895	1,642
<i>Giardia intestinalis</i>	0.96	1.43	2.57	0.22	0.39	2,250	4,049
<i>Toxoplasma gondii</i>	2.74	67.20	77.44	10.14	11.69	36,981	42,615
<i>Trichinella</i> spp.	<0.01	0.03	0.05	<0.01	0.01	8,947	16,814
<u>Viral</u>							
Astrovirus	0.49	0.26	0.45	0.04	0.07	797	1,396
Hepatitis A virus	0.10	2.42	2.52	0.36	0.38	36,428	38,072
Norovirus	172.77	61.10	84.47	9.22	12.75	534	738
Rotavirus	0.49	0.27	0.43	0.04	0.07	835	1,337
Sapovirus	0.49	0.21	0.38	0.03	0.06	664	1,174
Known		333.79	729.68	50.37	110.11	1,722	3,765
Unknown	1,214.46	703.39	1032.31	106.15	155.78	874	1,283
Total		1,037.18	1,761.98	156.52	265.89	1,039	1,765

¹Incidence per 10,000 residents.

TABLE A4. *Arkansas Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.08	0.13	0.03	0.04	139	221
<i>Brucella</i> spp.	0.02	0.08	0.11	0.03	0.04	14,461	19,484
<i>Campylobacter</i> spp.	26.73	12.20	62.51	4.12	21.12	1,543	7,902
<i>Clostridium botulinum</i>	<0.01	0.59	0.75	0.20	0.25	1,141,198	1,455,166
<i>Clostridium perfringens</i>	30.56	2.98	3.92	1.01	1.32	330	434
STEC O157:H7	1.89	4.81	5.10	1.62	1.72	8,612	9,146
STEC non-0157	3.37	0.71	1.27	0.24	0.43	715	1,277
ETEC	0.57	0.11	0.21	0.04	0.07	677	1,239
Other diarrheogenic <i>E. coli</i> ,	0.38	0.08	0.14	0.03	0.05	677	1,240
<i>Listeria monocytogenes</i>	0.03	8.46	8.55	2.86	2.89	1,080,509	1,092,260
<i>Salmonella</i> , spp., Nontyphoidal	62.09	66.63	193.09	22.51	65.25	3,626	10,507
<i>S. enterica</i> serotype Typhi	0.01	0.02	0.05	0.01	0.02	3,586	10,968
<i>Shigella</i> , spp	4.25	2.02	11.71	0.68	3.96	1,607	9,305
<i>Staphylococcus aureus</i>	7.63	1.03	1.45	0.35	0.49	455	642
Streptococcus spp. Group A	0.36	0.11	0.21	0.04	0.07	1,047	1,962
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,222	2,089
<i>Vibrio vulnificus</i>	<0.01	1.99	1.99	0.67	0.67	2,357,282	2,358,859
<i>Vibrio parahaemolyticus</i>	1.03	0.48	0.70	0.16	0.24	1,589	2,299
<i>Vibrio</i> spp., other	0.52	0.57	0.68	0.19	0.23	3,666	4,376
<i>Yersinia enterocolitica</i>	3.09	3.10	9.80	1.05	3.31	3,390	10,721
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.05	0.51	0.83	0.17	0.28	1,638	2,664
<i>Cyclospora cayetanensis</i>	0.04	0.01	0.02	<0.01	0.01	750	1,376
<i>Giardia intestinalis</i>	1.63	0.91	1.63	0.31	0.55	1,876	3,384
<i>Toxoplasma gondii</i>	2.74	24.86	28.70	8.40	9.70	30,639	35,361
<i>Trichinella</i> spp.	<0.01	0.01	0.02	<0.01	0.01	7,410	14,007
<u>Viral</u>							
Astrovirus	0.49	0.10	0.17	0.03	0.06	663	1,166
Hepatitis A virus	0.04	0.32	0.34	0.11	0.11	30,385	31,764
Norovirus	172.77	22.80	31.55	7.71	10.66	446	617
Rotavirus	0.49	0.10	0.16	0.03	0.05	686	1,107
Sapovirus	0.49	0.08	0.14	0.03	0.05	554	982
Known		155.75	365.92	52.63	123.65	1,623	3,813
Unknown	1,214.46	262.43	385.60	88.68	130.30	730	1,073
Total		418.18	751.53	141.31	253.95	918	1,650

¹Incidence per 10,000 residents.

TABLE A5. *California Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	1.49	2.37	0.04	0.06	194	308
<i>Brucella</i> spp.	0.05	4.26	5.66	0.11	0.15	21,454	28,514
<i>Campylobacter</i> spp.	26.73	233.28	1,167.00	6.09	30.44	2,277	11,389
<i>Clostridium botulinum</i>	<0.01	11.12	14.14	0.29	0.37	1,657,092	2,107,239
<i>Clostridium perfringens</i>	30.56	55.07	72.01	1.44	1.88	470	615
STEC O157:H7	1.33	63.93	67.74	1.67	1.77	12,501	13,246
STEC non-0157	2.38	9.75	16.92	0.25	0.44	1,068	1,853
ETEC	0.57	2.19	3.89	0.06	0.10	1,009	1,794
Other diarrheogenic <i>E. coli</i> ,	0.38	1.47	2.61	0.04	0.07	1,009	1,796
<i>Listeria monocytogenes</i>	0.06	330.57	333.68	8.62	8.70	1,563,922	1,578,639
<i>Salmonella</i> , spp., Nontyphoidal	25.59	521.63	1,488.29	13.61	38.83	5,318	15,173
<i>S. enterica</i> serotype Typhi	0.10	2.06	6.00	0.05	0.16	5,516	16,074
<i>Shigella</i> , spp	3.17	29.02	163.01	0.76	4.25	2,388	13,416
<i>Staphylococcus aureus</i>	7.63	19.37	26.99	0.51	0.70	662	923
Streptococcus spp. Group A	0.36	2.13	3.87	0.06	0.10	1,569	2,847
<i>Vibrio cholerae</i> , toxigenic	<0.01	0.02	0.04	<0.01	<0.01	1,836	3,047
<i>Vibrio vulnificus</i>	<0.01	47.29	47.32	1.23	1.23	3,394,739	3,396,956
<i>Vibrio parahaemolyticus</i>	1.31	11.75	16.74	0.31	0.44	2,337	3,328
<i>Vibrio</i> spp., other	0.66	13.56	16.09	0.35	0.42	5,323	6,314
<i>Yersinia enterocolitica</i>	3.09	59.00	183.13	1.54	4.78	4,983	15,465
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.68	6.40	10.16	0.17	0.27	2,440	3,873
<i>Cyclospora cayetanensis</i>	<0.01	0.01	0.02	<0.01	<0.01	1,118	1,993
<i>Giardia intestinalis</i>	1.84	19.90	34.77	0.52	0.91	2,819	4,926
<i>Toxoplasma gondii</i>	2.74	470.71	540.45	12.28	14.10	44,781	51,417
<i>Trichinella</i> spp.	<0.01	0.21	0.39	0.01	0.01	11,230	20,462
<u>Viral</u>							
Astrovirus	0.49	1.86	3.17	0.05	0.08	992	1,694
Hepatitis A virus	0.07	12.00	12.53	0.31	0.33	43,904	45,832
Norovirus	172.77	430.36	588.58	11.23	15.35	650	889
Rotavirus	0.49	1.93	3.03	0.05	0.08	1,032	1,619
Sapovirus	0.49	1.55	2.66	0.04	0.07	826	1,424
Known		2,363.87	4,833.26	61.67	126.09	2,160	4,416
Unknown	1,214.46	4,991.31	7,220.06	130.21	188.35	1,072	1,551
Total		7,355.18	12,053.32	191.88	314.44	1,279	2,096

¹Incidence per 10,000 residents.

TABLE A6. *Colorado Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.20	0.32	0.04	0.06	192	305
<i>Brucella</i> spp.	0.02	0.24	0.32	0.05	0.06	20,652	27,694
<i>Campylobacter</i> spp.	26.73	31.39	160.12	5.96	30.39	2,229	11,370
<i>Clostridium botulinum</i>	<0.01	1.50	1.92	0.28	0.36	1,625,814	2,077,408
<i>Clostridium perfringens</i>	30.56	7.56	9.88	1.43	1.87	470	614
STEC O157:H7	3.47	22.46	23.82	4.26	4.52	12,291	13,032
STEC non-0157	6.19	3.47	6.02	0.66	1.14	1,064	1,845
ETEC	0.57	0.30	0.54	0.06	0.10	1,018	1,799
Other diarrheogenic <i>E. coli</i> ,	0.38	0.20	0.36	0.04	0.07	1,018	1,801
<i>Listeria monocytogenes</i>	0.05	40.85	41.23	7.75	7.83	1,547,582	1,561,729
<i>Salmonella</i> , spp., Nontyphoidal	23.51	64.61	187.02	12.26	35.50	5,217	15,100
<i>S. enterica</i> serotype Typhi	0.05	0.12	0.38	0.02	0.07	4,775	15,360
<i>Shigella</i> , spp	2.29	2.85	16.22	0.54	3.08	2,357	13,418
<i>Staphylococcus aureus</i>	7.63	2.61	3.65	0.49	0.69	648	908
Streptococcus spp. Group A	0.36	0.30	0.54	0.06	0.10	1,593	2,866
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,787	2,992
<i>Vibrio vulnificus</i>	<0.01	3.23	3.23	0.61	0.61	3,391,898	3,394,109
<i>Vibrio parahaemolyticus</i>	0.65	0.80	1.14	0.15	0.22	2,342	3,329
<i>Vibrio</i> spp., other	0.33	0.93	1.10	0.18	0.21	5,340	6,326
<i>Yersinia enterocolitica</i>	3.09	8.14	25.24	1.55	4.79	5,003	15,511
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.62	2.09	3.30	0.40	0.63	2,451	3,877
<i>Cyclospora cayetanensis</i>	0.07	0.04	0.08	0.01	0.01	1,128	1,999
<i>Giardia intestinalis</i>	3.50	5.25	9.12	1.00	1.73	2,849	4,947
<i>Toxoplasma gondii</i>	2.74	63.35	72.91	12.02	13.84	43,849	50,466
<i>Trichinella</i> spp.	<0.01	0.03	0.05	0.01	0.01	11,186	20,383
<u>Viral</u>							
Astrovirus	0.49	0.25	0.43	0.05	0.08	980	1,679
Hepatitis A virus	0.03	0.77	0.80	0.15	0.15	43,659	45,579
Norovirus	172.77	57.91	79.55	10.99	15.10	636	874
Rotavirus	0.49	0.25	0.40	0.05	0.08	980	1,564
Sapovirus	0.49	0.21	0.36	0.04	0.07	821	1,416
Known		321.93	650.05	61.11	123.39	2,107	4,254
Unknown	1,214.46	681.41	986.37	129.34	187.22	1,065	1,542
Total		1,003.34	1,636.42	190.45	310.61	1,266	2,064

¹Incidence per 10,000 residents.

TABLE A7. *Connecticut Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.15	0.24	0.04	0.07	206	335
<i>Brucella</i> spp.	<0.01	<0.01	<0.01	<0.01	<0.01	22,293	30,261
<i>Campylobacter</i> spp.	26.73	23.24	121.62	6.46	33.82	2,418	12,652
<i>Clostridium botulinum</i>	<0.01	1.13	1.45	0.31	0.40	1,792,615	2,298,104
<i>Clostridium perfringens</i>	30.56	5.67	7.46	1.58	2.08	516	679
STEC O157:H7	2.26	10.99	11.68	3.06	3.25	13,544	14,386
STEC non-0157	4.03	1.66	2.95	0.46	0.82	1,146	2,034
ETEC	0.57	0.22	0.41	0.06	0.11	1,103	1,990
Other diarrheogenic <i>E. coli</i> ,	0.38	0.15	0.27	0.04	0.08	1,103	1,993
<i>Listeria monocytogenes</i>	0.11	64.92	65.57	18.05	18.23	1,714,485	1,731,610
<i>Salmonella</i> , spp., Nontyphoidal	27.28	55.93	164.50	15.55	45.74	5,702	16,772
<i>S. enterica</i> serotype Typhi	0.08	0.13	0.47	0.04	0.13	4,796	16,659
<i>Shigella</i> , spp	1.22	1.12	6.53	0.31	1.82	2,554	14,940
<i>Staphylococcus aureus</i>	7.63	1.92	2.73	0.54	0.76	702	996
Streptococcus spp. Group A	0.36	0.22	0.41	0.06	0.11	1,732	3,177
<i>Vibrio cholerae</i> , toxigenic	0.01	<0.01	0.01	<0.01	<0.01	1,906	3,274
<i>Vibrio vulnificus</i>	0.01	9.93	9.94	2.76	2.76	3,781,409	3,783,911
<i>Vibrio parahaemolyticus</i>	2.64	2.43	3.50	0.68	0.97	2,568	3,688
<i>Vibrio</i> spp., other	1.34	2.84	3.38	0.79	0.94	5,919	7,039
<i>Yersinia enterocolitica</i>	3.09	6.12	19.20	1.70	5.34	5,506	17,285
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.06	1.02	1.64	0.28	0.46	2,673	4,293
<i>Cyclospora cayetanensis</i>	1.81	0.80	1.44	0.22	0.40	1,223	2,212
<i>Giardia intestinalis</i>	3.18	3.54	6.27	0.98	1.74	3,097	5,479
<i>Toxoplasma gondii</i>	2.74	47.43	54.82	13.19	15.24	48,099	55,588
<i>Trichinella</i> spp.	<0.01	0.02	0.04	0.01	0.01	12,049	22,480
<u>Viral</u>							
Astrovirus	0.49	0.18	0.32	0.05	0.09	1,052	1,845
Hepatitis A virus	0.05	0.88	0.92	0.24	0.25	48,459	50,637
Norovirus	172.77	42.82	59.60	11.91	16.57	689	959
Rotavirus	0.49	0.18	0.30	0.05	0.08	1,033	1,696
Sapovirus	0.49	0.16	0.27	0.04	0.08	884	1,559
Known		285.82	547.92	79.48	152.36	2,710	5,194
Unknown	1,214.46	506.82	743.17	140.94	206.66	1,160	1,702
Total		792.64	1,291.08	220.42	359.02	1,462	2,381

¹Incidence per 10,000 residents.

TABLE A8. *Delaware Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.03	0.05	0.04	0.06	181	275
<i>Brucella</i> spp.	0.03	0.05	0.07	0.05	0.07	18,240	24,103
<i>Campylobacter</i> spp.	26.73	4.93	24.31	5.32	26.26	1,992	9,822
<i>Clostridium botulinum</i>	<0.01	0.23	0.29	0.25	0.31	1,404,035	1,791,188
<i>Clostridium perfringens</i>	30.56	1.19	1.53	1.29	1.65	422	541
STEC O157:H7	1.98	1.96	2.07	2.11	2.23	10,663	11,272
STEC non-0157	3.54	0.32	0.53	0.35	0.58	982	1,626
ETEC	0.57	0.05	0.08	0.05	0.09	941	1,586
Other diarrheogenic <i>E. coli</i> ,	0.38	0.03	0.06	0.04	0.06	941	1,587
<i>Listeria monocytogenes</i>	0.06	6.84	6.89	7.38	7.44	1,335,791	1,345,314
<i>Salmonella</i> , spp., Nontyphoidal	32.08	13.64	38.76	14.73	41.86	4,593	13,052
<i>S. enterica</i> serotype Typhi	0.05	0.02	0.06	0.02	0.06	4,298	13,339
<i>Shigella</i> , spp	6.23	1.23	6.68	1.32	7.22	2,127	11,599
<i>Staphylococcus aureus</i>	7.63	0.41	0.56	0.45	0.61	586	800
Streptococcus spp. Group A	0.36	0.05	0.08	0.05	0.09	1,472	2,522
<i>Vibrio cholerae</i> , toxigenic	0.01	<0.01	<0.01	<0.01	<0.01	1,643	2,636
<i>Vibrio vulnificus</i>	0.01	1.83	1.83	1.98	1.98	2,919,751	2,921,594
<i>Vibrio parahaemolyticus</i>	2.45	0.48	0.66	0.51	0.71	2,096	2,910
<i>Vibrio</i> spp., other	1.24	0.54	0.63	0.58	0.68	4,676	5,489
<i>Yersinia enterocolitica</i>	3.09	1.27	3.84	1.37	4.15	4,448	13,421
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.86	0.18	0.27	0.19	0.29	2,220	3,397
<i>Cyclospora cayetanensis</i>	0.18	0.02	0.03	0.02	0.03	1,044	1,762
<i>Giardia intestinalis</i>	1.60	0.39	0.64	0.42	0.69	2,611	4,341
<i>Toxoplasma gondii</i>	2.74	9.69	11.09	10.47	11.98	38,189	43,696
<i>Trichinella</i> spp.	<0.01	<0.01	0.01	0.01	0.01	10,278	17,886
<u>Viral</u>							
Astrovirus	0.49	0.04	0.07	0.04	0.07	903	1,479
Hepatitis A virus	0.03	0.12	0.13	0.13	0.14	37,753	39,340
Norovirus	172.77	9.16	12.30	9.90	13.28	573	769
Rotavirus	0.49	0.04	0.06	0.04	0.07	898	1,380
Sapovirus	0.49	0.03	0.06	0.04	0.06	758	1,249
Known		54.78	113.63	59.17	122.75	1,981	4,110
Unknown	1,214.46	107.82	152.02	116.46	164.21	959	1,352
Total		162.59	265.65	175.63	286.96	1,161	1,897

¹Incidence per 10,000 residents.

TABLE A9. *District of Columbia Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.04	0.05	0.06	0.08	294	385
<i>Brucella</i> spp.	0.04	0.07	0.09	0.12	0.14	27,112	33,274
<i>Campylobacter</i> spp.	26.73	5.35	22.70	8.27	35.11	3,093	13,136
<i>Clostridium botulinum</i>	<0.01	0.21	0.27	0.33	0.41	1,869,475	2,368,359
<i>Clostridium perfringens</i>	30.56	1.24	1.47	1.92	2.28	630	745
STEC O157:H7	0.82	0.77	0.80	1.18	1.23	14,467	15,040
STEC non-0157	1.46	0.16	0.22	0.25	0.35	1,741	2,366
ETEC	0.57	0.06	0.08	0.10	0.13	1,689	2,315
Other diarrheogenic <i>E. coli</i> ,	0.38	0.04	0.06	0.06	0.09	1,689	2,317
<i>Listeria monocytogenes</i>	0.06	6.73	6.70	10.42	10.37	1,780,069	1,771,440
<i>Salmonella</i> , spp., Nontyphoidal	24.31	10.55	27.50	16.33	42.54	6,717	17,504
<i>S. enterica</i> serotype Typhi	0.05	0.02	0.06	0.04	0.10	6,553	17,947
<i>Shigella</i> , spp	4.01	0.90	4.04	1.39	6.25	3,481	15,603
<i>Staphylococcus aureus</i>	7.63	0.45	0.55	0.70	0.85	912	1,119
Streptococcus spp. Group A	0.36	0.06	0.08	0.10	0.13	2,676	3,697
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	2,854	3,816
<i>Vibrio vulnificus</i>	<0.01	1.17	1.17	1.81	1.81	3,848,301	3,850,254
<i>Vibrio parahaemolyticus</i>	1.70	0.37	0.45	0.57	0.70	3,329	4,120
<i>Vibrio</i> spp., other	0.86	0.37	0.42	0.58	0.65	6,731	7,521
<i>Yersinia enterocolitica</i>	3.09	1.38	3.64	2.14	5.62	6,928	18,207
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.49	0.36	0.47	0.56	0.73	3,752	4,897
<i>Cyclospora cayetanensis</i>	4.13	0.50	0.69	0.77	1.06	1,874	2,572
<i>Giardia intestinalis</i>	3.54	1.07	1.45	1.65	2.25	4,661	6,345
<i>Toxoplasma gondii</i>	2.74	9.44	10.46	14.60	16.18	53,236	59,004
<i>Trichinella</i> spp.	<0.01	0.01	0.01	0.01	0.01	18,513	26,105
<u>Viral</u>							
Astrovirus	0.49	0.05	0.07	0.08	0.10	1,589	2,148
Hepatitis A virus	0.10	0.34	0.35	0.53	0.54	50,749	52,318
Norovirus	172.77	9.87	11.99	15.27	18.55	884	1,074
Rotavirus	0.49	0.05	0.06	0.07	0.10	1,514	1,978
Sapovirus	0.49	0.04	0.06	0.07	0.09	1,338	1,814
Known		51.69	95.97	79.96	148.46	2,749	5,104
Unknown	1,214.46	120.14	150.19	185.84	232.34	1,530	1,913
Total		171.83	246.17	265.81	380.80	1,766	2,530

¹Incidence per 10,000 residents.

TABLE A10. *Florida Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.64	1.01	0.03	0.05	162	257
<i>Brucella</i> spp.	0.03	1.13	1.50	0.06	0.08	17,614	23,458
<i>Campylobacter</i> spp.	26.73	97.03	486.01	4.96	24.86	1,857	9,299
<i>Clostridium botulinum</i>	<0.01	4.66	5.92	0.24	0.30	1,361,039	1,728,533
<i>Clostridium perfringens</i>	30.56	23.08	30.27	1.18	1.55	386	507
STEC O157:H7	0.89	17.92	19.00	0.92	0.97	10,258	10,878
STEC non-0157	1.60	2.68	4.71	0.14	0.24	858	1,510
ETEC	0.57	0.89	1.61	0.05	0.08	804	1,457
Other diarrheogenic <i>E. coli</i> ,	0.38	0.60	1.08	0.03	0.06	804	1,459
<i>Listeria monocytogenes</i>	0.04	100.94	101.98	5.16	5.22	1,280,458	1,293,687
<i>Salmonella</i> , spp., Nontyphoidal	59.55	505.97	1,443.51	25.88	73.83	4,346	12,397
<i>S. enterica</i> serotype Typhi	0.04	0.34	0.96	0.02	0.05	4,700	13,334
<i>Shigella</i> , spp	6.32	23.86	135.12	1.22	6.91	1,932	10,940
<i>Staphylococcus aureus</i>	7.63	8.12	11.35	0.42	0.58	544	761
Streptococcus spp. Group A	0.36	0.86	1.60	0.04	0.08	1,242	2,305
<i>Vibrio cholerae</i> , toxigenic	0.01	0.02	0.03	<0.01	<0.01	1,488	2,495
<i>Vibrio vulnificus</i>	0.01	38.76	38.79	1.98	1.98	2,771,410	2,773,244
<i>Vibrio parahaemolyticus</i>	2.58	9.51	13.67	0.49	0.70	1,884	2,708
<i>Vibrio</i> spp., other	1.31	11.05	13.15	0.56	0.67	4,317	5,141
<i>Yersinia enterocolitica</i>	3.09	24.24	76.03	1.24	3.89	4,013	12,587
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.64	6.25	10.06	0.32	0.51	1,951	3,143
<i>Cyclospora cayetanensis</i>	2.10	3.66	6.65	0.19	0.34	891	1,618
<i>Giardia intestinalis</i>	2.43	10.60	18.91	0.54	0.97	2,235	3,987
<i>Toxoplasma gondii</i>	2.74	196.76	226.22	10.06	11.57	36,697	42,191
<i>Trichinella</i> spp.	<0.01	0.09	0.16	<0.01	0.01	8,944	16,609
<u>Viral</u>							
Astrovirus	0.49	0.76	1.32	0.04	0.07	800	1,383
Hepatitis A virus	0.06	3.96	4.14	0.20	0.21	35,879	37,480
Norovirus	172.77	180.26	247.39	9.22	12.65	534	732
Rotavirus	0.49	0.81	1.28	0.04	0.07	848	1,336
Sapovirus	0.49	0.63	1.11	0.03	0.06	665	1,161
Known		1,276.07	2,904.52	65.26	148.55	1,997	4,544
Unknown	1,214.46	2,064.87	3,010.06	105.60	153.94	870	1,268
Total		3,340.94	5,914.58	170.87	302.49	1,109	1,963

¹Incidence per 10,000 residents.

TABLE A11. *Georgia Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.33	0.53	0.03	0.05	164	262
<i>Brucella</i> spp.	0.03	0.47	0.63	0.05	0.06	17,324	23,404
<i>Campylobacter</i> spp.	26.73	49.73	256.90	4.98	25.71	1,862	9,618
<i>Clostridium botulinum</i>	<0.01	2.41	3.08	0.24	0.31	1,377,303	1,760,328
<i>Clostridium perfringens</i>	30.56	12.13	15.95	1.21	1.60	397	522
STEC O157:H7	1.07	11.15	11.85	1.12	1.19	10,400	11,044
STEC non-0157	1.92	1.67	2.97	0.17	0.30	873	1,552
ETEC	0.57	0.47	0.85	0.05	0.09	833	1,511
Other diarrheogenic <i>E. coli</i> ,	0.38	0.32	0.57	0.03	0.06	832	1,513
<i>Listeria monocytogenes</i>	0.04	57.47	58.07	5.75	5.81	1,309,923	1,323,534
<i>Salmonella</i> , spp., Nontyphoidal	45.69	200.00	583.06	20.02	58.35	4,381	12,772
<i>S. enterica</i> serotype Typhi	0.05	0.19	0.61	0.02	0.06	4,047	13,044
<i>Shigella</i> , spp	7.56	14.75	85.63	1.48	8.57	1,953	11,341
<i>Staphylococcus aureus</i>	7.63	4.15	5.87	0.42	0.59	545	770
Streptococcus spp. Group A	0.36	0.46	0.85	0.05	0.09	1,297	2,402
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	0.01	<0.01	<0.01	1,473	2,520
<i>Vibrio vulnificus</i>	<0.01	8.25	8.26	0.83	0.83	2,871,532	2,873,440
<i>Vibrio parahaemolyticus</i>	1.04	2.02	2.91	0.20	0.29	1,945	2,802
<i>Vibrio</i> spp., other	0.53	2.36	2.81	0.24	0.28	4,482	5,338
<i>Yersinia enterocolitica</i>	3.09	12.83	40.41	1.28	4.04	4,158	13,093
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.91	3.86	6.23	0.39	0.62	2,015	3,254
<i>Cyclospora cayetanensis</i>	0.52	0.48	0.87	0.05	0.09	923	1,679
<i>Giardia intestinalis</i>	2.61	6.06	10.82	0.61	1.08	2,321	4,143
<i>Toxoplasma gondii</i>	2.74	101.33	116.98	10.14	11.71	36,980	42,696
<i>Trichinella</i> spp.	<0.01	0.04	0.08	<0.01	0.01	9,109	17,079
<u>Viral</u>							
Astrovirus	0.49	0.39	0.69	0.04	0.07	806	1,412
Hepatitis A virus	0.08	2.85	2.98	0.29	0.30	36,922	38,587
Norovirus	172.77	92.32	127.98	9.24	12.81	535	741
Rotavirus	0.49	0.40	0.64	0.04	0.06	814	1,322
Sapovirus	0.49	0.33	0.58	0.03	0.06	675	1,191
Known		589.22	1,349.68	58.97	135.07	1,894	4,339
Unknown	1,214.46	1,076.31	1,578.48	107.72	157.97	887	1,301
Total		1,665.54	2,928.16	166.68	293.05	1,092	1,921

¹Incidence per 10,000 residents.

TABLE A12. *Hawaii Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.05	0.08	0.03	0.06	173	294
<i>Brucella</i> spp.	0.11	0.31	0.42	0.22	0.30	20,205	27,599
<i>Campylobacter</i> spp.	26.73	7.91	41.96	5.63	29.88	2,108	11,180
<i>Clostridium botulinum</i>	<0.01	0.40	0.51	0.28	0.36	1,625,413	2,072,931
<i>Clostridium perfringens</i>	30.56	1.89	2.55	1.35	1.82	441	595
STEC O157:H7	1.62	2.77	2.95	1.97	2.10	12,187	12,984
STEC non-0157	2.89	0.38	0.72	0.27	0.51	928	1,763
ETEC	0.57	0.07	0.14	0.05	0.10	871	1,706
Other diarrheogenic <i>E. coli</i> ,	0.38	0.05	0.09	0.03	0.06	870	1,708
<i>Listeria monocytogenes</i>	0.08	17.89	18.13	12.74	12.91	1,535,453	1,555,716
<i>Salmonella</i> , spp., Nontyphoidal	46.42	32.90	96.96	23.43	69.05	5,047	14,875
<i>S. enterica</i> serotype Typhi	0.18	0.13	0.40	0.09	0.28	5,086	15,651
<i>Shigella</i> , spp	2.59	0.79	4.78	0.56	3.40	2,163	13,149
<i>Staphylococcus aureus</i>	7.63	0.65	0.95	0.47	0.68	610	888
Streptococcus spp. Group A	0.36	0.07	0.13	0.05	0.10	1,346	2,706
<i>Vibrio cholerae</i> , toxigenic	0.02	<0.01	0.01	<0.01	0.01	1,611	2,900
<i>Vibrio vulnificus</i>	0.02	11.28	11.29	8.03	8.04	3,349,313	3,351,631
<i>Vibrio parahaemolyticus</i>	8.66	2.61	3.89	1.86	2.77	2,148	3,203
<i>Vibrio</i> spp., other	4.39	3.14	3.79	2.24	2.70	5,096	6,150
<i>Yersinia enterocolitica</i>	3.09	2.01	6.56	1.43	4.67	4,624	15,122
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.11	0.03	0.06	0.02	0.04	2,180	3,705
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	964	1,895
<i>Giardia intestinalis</i>	1.49	0.51	0.98	0.37	0.70	2,449	4,691
<i>Toxoplasma gondii</i>	2.74	16.65	19.33	11.86	13.77	43,252	50,207
<i>Trichinella</i> spp.	<0.01	0.01	0.01	<0.01	0.01	9,705	19,479
<u>Viral</u>							
Astrovirus	0.49	0.06	0.11	0.04	0.08	865	1,612
Hepatitis A virus	0.04	0.25	0.27	0.18	0.19	43,005	45,049
Norovirus	172.77	14.59	20.76	10.39	14.79	601	856
Rotavirus	0.49	0.06	0.11	0.04	0.08	917	1,543
Sapovirus	0.49	0.05	0.09	0.04	0.07	719	1,355
Known		117.51	238.02	83.69	169.52	2,641	5,349
Unknown	1,214.46	167.31	254.16	119.16	181.02	981	1,491
Total		284.82	492.18	202.85	350.54	1,325	2,289

¹Incidence per 10,000 residents.

TABLE A13. *Idaho Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.05	0.08	0.03	0.05	151	254
<i>Brucella</i> spp.	0.02	0.06	0.08	0.03	0.05	16,075	22,362
<i>Campylobacter</i> spp.	26.73	7.46	40.94	4.63	25.39	1,732	9,499
<i>Clostridium botulinum</i>	<0.01	0.38	0.49	0.23	0.30	1,340,613	1,723,829
<i>Clostridium perfringens</i>	30.56	1.87	2.52	1.16	1.56	381	511
STEC O157:H7	8.83	14.37	15.33	8.91	9.51	10,094	10,770
STEC non-0157	15.76	2.00	3.80	1.24	2.36	786	1,495
ETEC	0.57	0.07	0.13	0.04	0.08	756	1,465
Other diarrheogenic <i>E. coli</i> ,	0.38	0.05	0.09	0.03	0.06	756	1,467
<i>Listeria monocytogenes</i>	0.02	3.74	3.79	2.32	2.35	1,284,766	1,301,449
<i>Salmonella</i> , spp., Nontyphoidal	22.04	14.78	44.66	9.17	27.71	4,160	12,572
<i>S. enterica</i> serotype Typhi	0.01	<0.01	0.01	<0.01	0.01	3,311	12,350
<i>Shigella</i> , spp	0.82	0.24	1.48	0.15	0.92	1,799	11,204
<i>Staphylococcus aureus</i>	7.63	0.62	0.91	0.39	0.57	506	741
Streptococcus spp. Group A	0.36	0.07	0.13	0.04	0.08	1,180	2,334
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,307	2,401
<i>Vibrio vulnificus</i>	<0.01	1.30	1.30	0.81	0.81	2,848,235	2,850,206
<i>Vibrio parahaemolyticus</i>	1.02	0.30	0.45	0.19	0.28	1,837	2,732
<i>Vibrio</i> spp., other	0.52	0.36	0.44	0.23	0.27	4,364	5,258
<i>Yersinia enterocolitica</i>	3.09	1.97	6.44	1.22	4.00	3,961	12,941
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	5.94	1.79	3.03	1.11	1.88	1,868	3,161
<i>Cyclospora cayetanensis</i>	0.10	0.01	0.03	0.01	0.02	838	1,628
<i>Giardia intestinalis</i>	4.13	1.41	2.68	0.88	1.66	2,119	4,021
<i>Toxoplasma gondii</i>	2.74	15.70	18.32	9.74	11.36	35,518	41,431
<i>Trichinella</i> spp.	<0.01	0.01	0.01	<0.01	0.01	8,164	16,463
<u>Viral</u>							
Astrovirus	0.49	0.06	0.11	0.04	0.07	722	1,356
Hepatitis A virus	0.04	0.20	0.21	0.13	0.13	36,295	38,030
Norovirus	172.77	13.87	19.88	8.60	12.33	498	714
Rotavirus	0.49	0.06	0.10	0.03	0.06	712	1,243
Sapovirus	0.49	0.05	0.09	0.03	0.06	608	1,147
Known		82.84	167.52	51.39	103.91	1,671	3,379
Unknown	1,214.46	162.29	246.90	100.67	153.15	829	1,261
Total		245.13	414.42	152.05	257.06	999	1,689

¹Incidence per 10,000 residents.

TABLE A14. *Illinois Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.47	0.74	0.04	0.06	183	285
<i>Brucella</i> spp.	0.03	0.82	1.09	0.06	0.08	19,277	25,611
<i>Campylobacter</i> spp.	26.73	71.45	356.63	5.55	27.68	2,075	10,357
<i>Clostridium botulinum</i>	<0.01	3.36	4.29	0.26	0.33	1,492,277	1,901,516
<i>Clostridium perfringens</i>	30.56	17.14	22.23	1.33	1.73	436	565
STEC O157:H7	1.58	22.95	24.30	1.78	1.89	11,292	11,956
STEC non-0157	2.82	3.61	6.16	0.28	0.48	995	1,696
ETEC	0.57	0.69	1.20	0.05	0.09	947	1,648
Other diarrheogenic <i>E. coli</i> ,	0.38	0.46	0.81	0.04	0.06	947	1,650
<i>Listeria monocytogenes</i>	0.05	83.19	83.90	6.46	6.51	1,414,655	1,426,764
<i>Salmonella</i> , spp., Nontyphoidal	29.28	181.92	519.55	14.12	40.33	4,824	13,776
<i>S. enterica</i> serotype Typhi	0.07	0.43	1.31	0.03	0.10	4,722	14,305
<i>Shigella</i> , spp	3.87	10.94	60.92	0.85	4.73	2,194	12,214
<i>Staphylococcus aureus</i>	7.63	5.97	8.26	0.46	0.64	607	840
Streptococcus spp. Group A	0.36	0.68	1.20	0.05	0.09	1,477	2,619
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,686	2,767
<i>Vibrio vulnificus</i>	<0.01	5.28	5.28	0.41	0.41	3,083,872	3,085,862
<i>Vibrio parahaemolyticus</i>	0.48	1.33	1.88	0.10	0.15	2,158	3,043
<i>Vibrio</i> spp., other	0.24	1.53	1.81	0.12	0.14	4,877	5,762
<i>Yersinia enterocolitica</i>	3.09	18.28	56.13	1.42	4.36	4,592	14,105
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.18	3.44	5.39	0.27	0.42	2,265	3,545
<i>Cyclospora cayetanensis</i>	0.24	0.33	0.57	0.03	0.04	1,050	1,831
<i>Giardia intestinalis</i>	1.95	6.61	11.33	0.51	0.88	2,637	4,519
<i>Toxoplasma gondii</i>	2.74	142.73	163.75	11.08	12.71	40,406	46,357
<i>Trichinella</i> spp.	<0.01	0.07	0.12	0.01	0.01	10,428	18,687
<u>Viral</u>							
Astrovirus	0.49	0.58	0.97	0.04	0.08	920	1,546
Hepatitis A virus	0.04	2.03	2.11	0.16	0.16	39,851	41,574
Norovirus	172.77	132.40	179.89	10.28	13.96	595	808
Rotavirus	0.49	0.59	0.92	0.05	0.07	934	1,459
Sapovirus	0.49	0.48	0.82	0.04	0.06	769	1,303
Known		719.78	1,523.57	55.87	118.27	1,926	4,077
Unknown	1,214.46	1,546.05	2,215.21	120.02	171.96	988	1,416
Total		2,265.83	3,738.78	175.89	290.23	1,169	1,929

¹Incidence per 10,000 residents.

TABLE A15. *Indiana Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.21	0.33	0.03	0.05	156	252
<i>Brucella</i> spp.	0.01	0.10	0.14	0.02	0.02	16,460	22,341
<i>Campylobacter</i> spp.	26.73	31.10	162.13	4.73	24.67	1,771	9,231
<i>Clostridium botulinum</i>	<0.01	1.52	1.94	0.23	0.30	1,318,608	1,686,954
<i>Clostridium perfringens</i>	30.56	7.64	10.07	1.16	1.53	380	502
STEC O157:H7	2.16	14.11	15.00	2.15	2.28	9,954	10,579
STEC non-0157	3.85	2.09	3.76	0.32	0.57	826	1,484
ETEC	0.57	0.29	0.54	0.04	0.08	789	1,446
Other diarrheogenic <i>E. coli</i> ,	0.38	0.20	0.36	0.03	0.05	789	1,448
<i>Listeria monocytogenes</i>	0.04	32.69	33.04	4.97	5.03	1,255,622	1,269,220
<i>Salmonella</i> , spp., Nontyphoidal	21.98	60.35	176.95	9.19	26.93	4,178	12,251
<i>S. enterica</i> serotype Typhi	0.02	0.04	0.13	0.01	0.02	3,777	12,436
<i>Shigella</i> , spp	2.32	2.82	16.58	0.43	2.52	1,854	10,884
<i>Staphylococcus aureus</i>	7.63	2.60	3.69	0.40	0.56	519	737
Streptococcus spp. Group A	0.36	0.29	0.54	0.04	0.08	1,229	2,299
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,391	2,405
<i>Vibrio vulnificus</i>	<0.01	1.31	1.31	0.20	0.20	2,757,503	2,759,349
<i>Vibrio parahaemolyticus</i>	0.26	0.32	0.46	0.05	0.07	1,853	2,683
<i>Vibrio</i> spp., other	0.13	0.37	0.45	0.06	0.07	4,291	5,121
<i>Yersinia enterocolitica</i>	3.09	8.05	25.51	1.23	3.88	3,967	12,566
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	2.12	2.67	4.34	0.41	0.66	1,914	3,115
<i>Cyclospora cayetanensis</i>	0.06	0.03	0.06	0.01	0.01	875	1,607
<i>Giardia intestinalis</i>	1.68	2.43	4.39	0.37	0.67	2,199	3,964
<i>Toxoplasma gondii</i>	2.74	63.65	73.62	9.69	11.20	35,328	40,856
<i>Trichinella</i> spp.	<0.01	0.03	0.05	<0.01	0.01	8,605	16,324
<u>Viral</u>							
Astrovirus	0.49	0.24	0.43	0.04	0.07	762	1,350
Hepatitis A virus	0.02	0.46	0.48	0.07	0.07	35,406	37,019
Norovirus	172.77	57.80	80.53	8.80	12.26	509	709
Rotavirus	0.49	0.25	0.40	0.04	0.06	768	1,260
Sapovirus	0.49	0.20	0.37	0.03	0.06	639	1,139
Known		293.87	617.59	44.72	93.99	1,581	3,322
Unknown	1,214.46	673.74	993.72	102.53	151.23	844	1,245
Total		967.61	1,611.31	147.26	245.22	983	1,638

¹Incidence per 10,000 residents.

TABLE A16. *Iowa Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.10	0.17	0.03	0.06	169	280
<i>Brucella</i> spp.	0.02	0.10	0.14	0.03	0.04	18,149	24,951
<i>Campylobacter</i> spp.	26.73	16.26	87.24	5.26	28.23	1,969	10,561
<i>Clostridium botulinum</i>	<0.01	0.81	1.03	0.26	0.33	1,488,933	1,913,103
<i>Clostridium perfringens</i>	30.56	4.03	5.35	1.30	1.73	427	567
STEC O157:H7	6.73	23.36	24.87	7.56	8.05	11,236	11,960
STEC non-0157	12.01	3.41	6.24	1.10	2.02	919	1,680
ETEC	0.57	0.16	0.29	0.05	0.09	886	1,648
Other diarrheogenic <i>E. coli</i> ,	0.38	0.10	0.19	0.03	0.06	886	1,650
<i>Listeria monocytogenes</i>	0.03	11.44	11.57	3.70	3.74	1,427,606	1,443,716
<i>Salmonella</i> , spp., Nontyphoidal	32.42	46.93	140.10	15.18	45.33	4,683	13,981
<i>S. enterica</i> serotype Typhi	0.03	0.03	0.11	0.01	0.04	3,734	13,710
<i>Shigella</i> , spp	2.31	1.48	8.91	0.48	2.88	2,068	12,469
<i>Staphylococcus aureus</i>	7.63	1.35	1.95	0.44	0.63	573	825
Streptococcus spp. Group A	0.36	0.15	0.29	0.05	0.09	1,390	2,630
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,521	2,696
<i>Vibrio vulnificus</i>	<0.01	2.77	2.77	0.90	0.90	3,161,565	3,163,699
<i>Vibrio parahaemolyticus</i>	1.02	0.66	0.97	0.22	0.31	2,099	3,061
<i>Vibrio</i> spp., other	0.52	0.79	0.94	0.25	0.30	4,904	5,866
<i>Yersinia enterocolitica</i>	3.09	4.31	13.77	1.39	4.46	4,514	14,422
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	6.79	4.54	7.46	1.47	2.41	2,164	3,554
<i>Cyclospora cayetanensis</i>	0.04	0.01	0.02	<0.01	0.01	983	1,831
<i>Giardia intestinalis</i>	3.30	2.54	4.63	0.82	1.50	2,488	4,532
<i>Toxoplasma gondii</i>	2.74	33.65	39.07	10.89	12.64	39,709	46,104
<i>Trichinella</i> spp.	<0.01	0.01	0.03	<0.01	0.01	9,613	18,549
<u>Viral</u>							
Astrovirus	0.49	0.13	0.23	0.04	0.07	842	1,523
Hepatitis A virus	0.05	0.61	0.64	0.20	0.21	40,376	42,244
Norovirus	172.77	30.06	42.44	9.73	13.73	563	795
Rotavirus	0.49	0.12	0.21	0.04	0.07	822	1,392
Sapovirus	0.49	0.11	0.19	0.03	0.06	709	1,289
Known		190.03	401.82	61.49	130.02	1,961	4,147
Unknown	1,214.46	355.14	529.45	114.92	171.32	946	1,411
Total		545.18	931.27	176.41	301.34	1,154	1,972

¹Incidence per 10,000 residents.

TABLE A17. *Kansas Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.10	0.16	0.03	0.05	167	269
<i>Brucella</i> spp.	0.02	0.12	0.17	0.04	0.06	17,953	24,263
<i>Campylobacter</i> spp.	26.73	14.90	77.15	5.15	26.66	1,927	9,974
<i>Clostridium botulinum</i>	<0.01	0.72	0.92	0.25	0.32	1,428,476	1,825,864
<i>Clostridium perfringens</i>	30.56	3.62	4.77	1.25	1.65	409	539
STEC O157:H7	2.81	8.75	9.30	3.03	3.21	10,780	11,449
STEC non-0157	5.01	1.31	2.33	0.45	0.80	902	1,606
ETEC	0.57	0.14	0.26	0.05	0.09	860	1,564
Other diarrheogenic <i>E. coli</i> ,	0.38	0.09	0.17	0.03	0.06	860	1,566
<i>Listeria monocytogenes</i>	0.03	11.87	12.00	4.10	4.15	1,358,690	1,372,845
<i>Salmonella</i> , spp., Nontyphoidal	29.79	39.14	114.20	13.52	39.46	4,539	13,245
<i>S. enterica</i> serotype Typhi	0.02	0.02	0.08	0.01	0.03	4,181	13,516
<i>Shigella</i> , spp	3.53	2.06	12.01	0.71	4.15	2,021	11,761
<i>Staphylococcus aureus</i>	7.63	1.24	1.76	0.43	0.61	562	796
Streptococcus spp. Group A	0.36	0.14	0.26	0.05	0.09	1,341	2,488
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,522	2,608
<i>Vibrio vulnificus</i>	<0.01	2.45	2.45	0.84	0.85	2,978,905	2,980,886
<i>Vibrio parahaemolyticus</i>	1.02	0.60	0.86	0.21	0.30	2,013	2,903
<i>Vibrio</i> spp., other	0.52	0.70	0.83	0.24	0.29	4,645	5,534
<i>Yersinia enterocolitica</i>	3.09	3.85	12.14	1.33	4.19	4,309	13,579
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	2.48	1.50	2.43	0.52	0.84	2,087	3,373
<i>Cyclospora cayetanensis</i>	0.02	0.01	0.01	<0.01	<0.01	953	1,738
<i>Giardia intestinalis</i>	2.26	1.57	2.80	0.54	0.97	2,404	4,295
<i>Toxoplasma gondii</i>	2.74	30.43	35.14	10.51	12.14	38,345	44,277
<i>Trichinella</i> spp.	<0.01	0.01	0.03	<0.01	0.01	9,434	17,707
<u>Viral</u>							
Astrovirus	0.49	0.12	0.21	0.04	0.07	832	1,462
Hepatitis A virus	0.03	0.33	0.35	0.11	0.12	38,287	40,016
Norovirus	172.77	27.58	38.30	9.53	13.24	552	766
Rotavirus	0.49	0.12	0.19	0.04	0.07	840	1,367
Sapovirus	0.49	0.10	0.17	0.03	0.06	697	1,233
Known		153.60	331.42	53.07	114.52	1,794	3,871
Unknown	1,214.46	322.22	473.19	111.34	163.51	917	1,346
Total		475.82	804.60	164.42	278.03	1,089	1,841

¹Incidence per 10,000 residents.

TABLE A18. *Kentucky Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.13	0.20	0.03	0.05	149	232
<i>Brucella</i> spp.	0.01	0.06	0.08	0.01	0.02	15,248	20,416
<i>Campylobacter</i> spp.	26.73	19.28	97.52	4.39	22.19	1,641	8,300
<i>Clostridium botulinum</i>	<0.01	0.92	1.17	0.21	0.27	1,193,932	1,522,887
<i>Clostridium perfringens</i>	30.56	4.71	6.13	1.07	1.39	350	456
STEC O157:H7	2.36	9.36	9.93	2.13	2.26	9,030	9,576
STEC non-0157	4.21	1.44	2.50	0.33	0.57	778	1,353
ETEC	0.57	0.18	0.33	0.04	0.07	740	1,315
Other diarrheogenic <i>E. coli</i> ,	0.38	0.12	0.22	0.03	0.05	740	1,316
<i>Listeria monocytogenes</i>	0.03	13.40	13.53	3.05	3.08	1,132,572	1,143,457
<i>Salmonella</i> , spp., Nontyphoidal	24.63	41.48	119.46	9.44	27.18	3,831	11,034
<i>S. enterica</i> serotype Typhi	0.01	0.02	0.07	0.01	0.02	3,705	11,422
<i>Shigella</i> , spp	4.42	3.35	18.99	0.76	4.32	1,724	9,784
<i>Staphylococcus aureus</i>	7.63	1.62	2.26	0.37	0.51	484	675
Streptococcus spp. Group A	0.36	0.18	0.33	0.04	0.07	1,149	2,086
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,318	2,205
<i>Vibrio vulnificus</i>	<0.01	0.56	0.57	0.13	0.13	2,473,186	2,474,809
<i>Vibrio parahaemolyticus</i>	0.19	0.14	0.20	0.03	0.05	1,704	2,430
<i>Vibrio</i> spp., other	0.10	0.16	0.19	0.04	0.04	3,886	4,611
<i>Yersinia enterocolitica</i>	3.09	4.93	15.33	1.12	3.49	3,628	11,290
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.65	1.29	2.05	0.29	0.47	1,774	2,823
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	820	1,461
<i>Giardia intestinalis</i>	2.12	1.91	3.34	0.43	0.76	2,051	3,594
<i>Toxoplasma gondii</i>	2.74	38.80	44.65	8.83	10.16	32,193	37,050
<i>Trichinella</i> spp.	<0.01	0.02	0.03	<0.01	0.01	8,087	14,847
<u>Viral</u>							
Astrovirus	0.49	0.15	0.26	0.04	0.06	719	1,233
Hepatitis A virus	0.02	0.35	0.36	0.08	0.08	31,909	33,321
Norovirus	172.77	35.98	49.26	8.18	11.21	474	649
Rotavirus	0.49	0.16	0.25	0.04	0.06	733	1,163
Sapovirus	0.49	0.13	0.22	0.03	0.05	602	1,040
Known		180.83	389.47	41.14	88.61	1,428	3,076
Unknown	1,214.46	417.30	604.46	94.94	137.52	782	1,132
Total		598.13	993.93	136.08	226.13	906	1,505

¹Incidence per 10,000 residents.

TABLE A19. *Louisiana Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.14	0.21	0.03	0.05	149	227
<i>Brucella</i> spp.	0.01	0.10	0.13	0.02	0.03	15,432	20,283
<i>Campylobacter</i> spp.	26.73	20.31	98.66	4.39	21.33	1,643	7,980
<i>Clostridium botulinum</i>	<0.01	0.95	1.20	0.20	0.26	1,168,451	1,481,592
<i>Clostridium perfringens</i>	30.56	4.84	6.24	1.05	1.35	343	442
STEC O157:H7	0.54	2.22	2.35	0.48	0.51	8,840	9,348
STEC non-0157	0.97	0.35	0.59	0.08	0.13	782	1,319
ETEC	0.57	0.19	0.33	0.04	0.07	736	1,273
Other diarrheogenic <i>E. coli</i> ,	0.38	0.13	0.22	0.03	0.05	735	1,274
<i>Listeria monocytogenes</i>	0.04	18.80	18.96	4.06	4.10	1,098,460	1,107,790
<i>Salmonella</i> , spp., Nontyphoidal	51.75	90.84	254.82	19.64	55.09	3,795	10,645
<i>S. enterica</i> serotype Typhi	0.01	0.01	0.03	<0.01	0.01	4,175	11,508
<i>Shigella</i> , spp	5.78	4.61	25.11	1.00	5.43	1,725	9,393
<i>Staphylococcus aureus</i>	7.63	1.71	2.34	0.37	0.51	485	664
Streptococcus spp. Group A	0.36	0.19	0.33	0.04	0.07	1,136	2,011
<i>Vibrio cholerae</i> , toxigenic	0.01	<0.01	0.01	<0.01	<0.01	1,351	2,179
<i>Vibrio vulnificus</i>	0.01	7.94	7.95	1.72	1.72	2,370,828	2,372,352
<i>Vibrio parahaemolyticus</i>	2.61	2.02	2.84	0.44	0.61	1,670	2,349
<i>Vibrio</i> spp., other	1.32	2.30	2.71	0.50	0.59	3,751	4,429
<i>Yersinia enterocolitica</i>	3.09	5.05	15.46	1.09	3.34	3,537	10,817
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.13	0.91	1.42	0.20	0.31	1,751	2,732
<i>Cyclospora cayetanensis</i>	0.04	0.01	0.02	<0.01	0.01	815	1,414
<i>Giardia intestinalis</i>	0.94	0.89	1.52	0.19	0.33	2,030	3,472
<i>Toxoplasma gondii</i>	2.74	40.27	46.05	8.71	9.96	31,747	36,305
<i>Trichinella</i> spp.	<0.01	0.02	0.03	<0.01	0.01	8,138	14,464
<u>Viral</u>							
Astrovirus	0.49	0.16	0.27	0.04	0.06	728	1,208
Hepatitis A virus	0.03	0.41	0.43	0.09	0.09	30,822	32,142
Norovirus	172.77	37.92	50.99	8.20	11.02	475	638
Rotavirus	0.49	0.17	0.26	0.04	0.06	766	1,168
Sapovirus	0.49	0.14	0.23	0.03	0.05	606	1,015
Known		243.61	541.72	52.67	117.12	1,680	3,736
Unknown	1,214.46	435.12	619.18	94.07	133.86	775	1,102
Total		678.73	1,160.90	146.74	250.98	960	1,643

¹Incidence per 10,000 residents.

TABLE A20. *Maine Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.05	0.07	0.03	0.05	171	269
<i>Brucella</i> spp.	0.01	0.02	0.03	0.02	0.02	17,701	23,776
<i>Campylobacter</i> spp.	26.73	6.83	34.85	5.14	26.24	1,922	9,815
<i>Clostridium botulinum</i>	<0.01	0.33	0.42	0.24	0.31	1,398,028	1,787,999
<i>Clostridium perfringens</i>	30.56	1.67	2.17	1.25	1.63	411	535
STEC O157:H7	2.86	4.02	4.26	3.03	3.21	10,583	11,222
STEC non-0157	5.11	0.63	1.08	0.47	0.82	923	1,597
ETEC	0.57	0.07	0.12	0.05	0.09	885	1,559
Other diarrheogenic <i>E. coli</i> ,	0.38	0.04	0.08	0.03	0.06	885	1,561
<i>Listeria monocytogenes</i>	0.07	12.86	12.98	9.68	9.77	1,332,976	1,345,109
<i>Salmonella</i> , spp., Nontyphoidal	22.97	13.71	39.74	10.32	29.92	4,493	13,027
<i>S. enterica</i> serotype Typhi	0.01	0.01	0.02	0.01	0.02	4,015	13,154
<i>Shigella</i> , spp	0.71	0.19	1.10	0.15	0.83	2,035	11,586
<i>Staphylococcus aureus</i>	7.63	0.57	0.80	0.43	0.60	563	787
Streptococcus spp. Group A	0.36	0.07	0.12	0.05	0.09	1,384	2,482
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,542	2,582
<i>Vibrio vulnificus</i>	<0.01	1.45	1.45	1.09	1.09	2,926,770	2,928,678
<i>Vibrio parahaemolyticus</i>	1.34	0.36	0.51	0.27	0.39	2,027	2,878
<i>Vibrio</i> spp., other	0.68	0.42	0.49	0.31	0.37	4,616	5,467
<i>Yersinia enterocolitica</i>	3.09	1.77	5.50	1.34	4.14	4,325	13,398
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	2.90	0.82	1.29	0.62	0.97	2,120	3,350
<i>Cyclospora cayetanensis</i>	0.09	0.01	0.02	0.01	0.02	981	1,733
<i>Giardia intestinalis</i>	5.09	1.67	2.89	1.26	2.18	2,466	4,276
<i>Toxoplasma gondii</i>	2.74	13.73	15.81	10.34	11.90	37,696	43,405
<i>Trichinella</i> spp.	<0.01	0.01	0.01	<0.01	0.01	9,652	17,585
<u>Viral</u>							
Astrovirus	0.49	0.06	0.09	0.04	0.07	849	1,451
Hepatitis A virus	0.03	0.15	0.16	0.11	0.12	37,657	39,313
Norovirus	172.77	12.66	17.37	9.53	13.08	552	757
Rotavirus	0.49	0.05	0.09	0.04	0.07	843	1,347
Sapovirus	0.49	0.05	0.08	0.03	0.06	713	1,226
Known		74.26	143.62	55.90	108.12	1,926	3,726
Unknown	1,214.46	148.86	215.18	112.07	161.99	923	1,334
Total		223.12	358.79	167.97	270.11	1,116	1,795

¹Incidence per 10,000 residents.

TABLE A21. *Maryland Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.24	0.42	0.04	0.07	205	357
<i>Brucella</i> spp.	0.01	0.19	0.26	0.03	0.04	22,542	31,810
<i>Campylobacter</i> spp.	26.73	39.04	220.88	6.58	37.26	2,463	13,938
<i>Clostridium botulinum</i>	<0.01	2.01	2.59	0.34	0.44	1,932,835	2,498,991
<i>Clostridium perfringens</i>	30.56	9.87	13.36	1.67	2.25	545	737
STEC O157:H7	1.82	15.73	16.81	2.65	2.83	14,557	15,553
STEC non-0157	3.25	2.18	4.19	0.37	0.71	1,128	2,172
ETEC	0.57	0.37	0.72	0.06	0.12	1,101	2,145
Other diarrheogenic <i>E. coli</i> ,	0.38	0.25	0.48	0.04	0.08	1,101	2,148
<i>Listeria monocytogenes</i>	0.06	70.12	71.03	11.83	11.98	1,869,555	1,893,900
<i>Salmonella</i> , spp., Nontyphoidal	32.25	114.01	351.58	19.23	59.30	5,963	18,389
<i>S. enterica</i> serotype Typhi	0.10	0.24	1.05	0.04	0.18	3,878	17,229
<i>Shigella</i> , spp	3.72	5.68	36.30	0.96	6.12	2,579	16,472
<i>Staphylococcus aureus</i>	7.63	3.21	4.78	0.54	0.81	710	1,057
Streptococcus spp. Group A	0.36	0.37	0.72	0.06	0.12	1,737	3,438
<i>Vibrio cholerae</i> , toxigenic	0.01	0.01	0.01	<0.01	<0.01	1,827	3,438
<i>Vibrio vulnificus</i>	0.01	17.93	17.95	3.02	3.03	4,188,511	4,191,417
<i>Vibrio parahaemolyticus</i>	2.61	4.15	6.19	0.70	1.04	2,683	4,002
<i>Vibrio</i> spp., other	1.32	5.03	6.06	0.85	1.02	6,417	7,735
<i>Yersinia enterocolitica</i>	3.09	10.66	34.95	1.80	5.89	5,819	19,083
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.59	0.95	1.62	0.16	0.27	2,734	4,640
<i>Cyclospora cayetanensis</i>	0.23	0.16	0.32	0.03	0.05	1,221	2,385
<i>Giardia intestinalis</i>	1.34	2.47	4.70	0.42	0.79	3,119	5,922
<i>Toxoplasma gondii</i>	2.74	82.92	97.09	13.99	16.38	51,003	59,719
<i>Trichinella</i> spp.	<0.01	0.03	0.07	0.01	0.01	11,818	24,047
<u>Viral</u>							
Astrovirus	0.49	0.30	0.57	0.05	0.10	1,025	1,959
Hepatitis A virus	0.06	1.89	1.98	0.32	0.33	53,040	55,597
Norovirus	172.77	71.79	104.38	12.11	17.60	701	1,019
Rotavirus	0.49	0.28	0.50	0.05	0.09	961	1,744
Sapovirus	0.49	0.25	0.48	0.04	0.08	869	1,663
Known		462.31	1,002.04	77.98	169.01	2,637	5,716
Unknown	1,214.46	859.02	1,317.46	144.89	222.21	1,193	1,830
Total		1,321.33	2,319.50	222.87	391.23	1,476	2,591

¹Incidence per 10,000 residents.

TABLE A22. *Massachusetts Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.29	0.45	0.04	0.07	213	336
<i>Brucella</i> spp.	0.01	0.12	0.17	0.02	0.02	22,509	30,193
<i>Campylobacter</i> spp.	26.73	44.02	224.80	6.58	33.59	2,460	12,565
<i>Clostridium botulinum</i>	<0.01	2.08	2.67	0.31	0.40	1,778,985	2,278,394
<i>Clostridium perfringens</i>	30.56	10.67	13.87	1.59	2.07	522	678
STEC O157:H7	2.09	18.86	19.99	2.82	2.99	13,479	14,282
STEC non-0157	3.73	2.99	5.11	0.45	0.76	1,197	2,046
ETEC	0.57	0.44	0.76	0.07	0.11	1,155	2,004
Other diarrheogenic <i>E. coli</i> ,	0.38	0.29	0.51	0.04	0.08	1,155	2,006
<i>Listeria monocytogenes</i>	0.08	88.92	89.65	13.29	13.40	1,701,692	1,715,780
<i>Salmonella</i> , spp., Nontyphoidal	37.85	145.46	422.13	21.73	63.07	5,742	16,663
<i>S. enterica</i> serotype Typhi	0.10	0.32	1.08	0.05	0.16	4,873	16,558
<i>Shigella</i> , spp	2.07	3.64	20.58	0.54	3.08	2,624	14,850
<i>Staphylococcus aureus</i>	7.63	3.65	5.09	0.55	0.76	715	997
Streptococcus spp. Group A	0.36	0.43	0.76	0.06	0.11	1,817	3,200
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,983	3,292
<i>Vibrio vulnificus</i>	<0.01	6.42	6.42	0.96	0.96	3,747,470	3,749,885
<i>Vibrio parahaemolyticus</i>	0.92	1.62	2.28	0.24	0.34	2,622	3,695
<i>Vibrio</i> spp., other	0.47	1.86	2.20	0.28	0.33	5,944	7,015
<i>Yersinia enterocolitica</i>	3.09	11.58	35.56	1.73	5.31	5,602	17,202
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.73	3.19	4.99	0.48	0.75	2,762	4,312
<i>Cyclospora cayetanensis</i>	0.64	0.55	0.95	0.08	0.14	1,281	2,227
<i>Giardia intestinalis</i>	3.88	8.40	14.32	1.26	2.14	3,236	5,515
<i>Toxoplasma gondii</i>	2.74	88.20	101.45	13.18	15.16	48,060	55,279
<i>Trichinella</i> spp.	<0.01	0.04	0.07	0.01	0.01	12,618	22,623
<u>Viral</u>							
Astrovirus	0.49	0.36	0.61	0.05	0.09	1,097	1,856
Hepatitis A virus	0.09	3.04	3.18	0.45	0.47	48,160	50,248
Norovirus	172.77	81.09	110.95	12.12	16.58	701	960
Rotavirus	0.49	0.35	0.56	0.05	0.08	1,069	1,704
Sapovirus	0.49	0.30	0.51	0.05	0.08	923	1,569
Known		529.19	1,091.68	79.07	163.11	2,618	5,402
Unknown	1,214.46	964.77	1,385.72	144.15	207.04	1,187	1,705
Total		1,493.96	2,477.39	223.22	370.16	1,472	2,441

¹Incidence per 10,000 residents.

TABLE A23. *Michigan Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.33	0.53	0.03	0.05	165	269
<i>Brucella</i> spp.	0.03	0.48	0.65	0.05	0.07	17,787	24,189
<i>Campylobacter</i> spp.	26.73	50.31	263.65	5.08	26.64	1,902	9,967
<i>Clostridium botulinum</i>	<0.01	2.47	3.16	0.25	0.32	1,427,930	1,826,081
<i>Clostridium perfringens</i>	30.56	12.28	16.28	1.24	1.65	406	538
STEC O157:H7	1.95	20.77	22.09	2.10	2.23	10,763	11,446
STEC non-0157	3.48	3.02	5.49	0.31	0.56	877	1,595
ETEC	0.57	0.47	0.87	0.05	0.09	835	1,553
Other diarrheogenic <i>E. coli</i> ,	0.38	0.31	0.58	0.03	0.06	835	1,555
<i>Listeria monocytogenes</i>	0.05	65.03	65.76	6.57	6.65	1,358,040	1,373,424
<i>Salmonella</i> , spp., Nontyphoidal	19.90	88.71	260.62	8.96	26.34	4,504	13,233
<i>S. enterica</i> serotype Typhi	0.04	0.15	0.50	0.02	0.05	4,138	13,506
<i>Shigella</i> , spp	1.59	3.11	18.44	0.31	1.86	1,984	11,748
<i>Staphylococcus aureus</i>	7.63	4.19	5.99	0.42	0.61	555	794
Streptococcus spp. Group A	0.36	0.46	0.87	0.05	0.09	1,300	2,469
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,484	2,592
<i>Vibrio vulnificus</i>	<0.01	2.38	2.38	0.24	0.24	2,979,760	2,981,769
<i>Vibrio parahaemolyticus</i>	0.29	0.57	0.83	0.06	0.08	1,982	2,888
<i>Vibrio</i> spp., other	0.15	0.67	0.81	0.07	0.08	4,615	5,521
<i>Yersinia enterocolitica</i>	3.09	12.99	41.43	1.31	4.19	4,250	13,554
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.92	3.88	6.36	0.39	0.64	2,041	3,351
<i>Cyclospora cayetanensis</i>	0.15	0.14	0.26	0.01	0.03	926	1,726
<i>Giardia intestinalis</i>	2.46	5.68	10.36	0.57	1.05	2,335	4,261
<i>Toxoplasma gondii</i>	2.74	103.64	119.97	10.47	12.12	38,194	44,214
<i>Trichinella</i> spp.	<0.01	0.04	0.09	<0.01	0.01	9,153	17,569
<u>Viral</u>							
Astrovirus	0.49	0.39	0.70	0.04	0.07	810	1,452
Hepatitis A virus	0.05	1.88	1.97	0.19	0.20	38,247	40,006
Norovirus	172.77	93.28	130.63	9.43	13.20	546	764
Rotavirus	0.49	0.40	0.66	0.04	0.07	823	1,360
Sapovirus	0.49	0.33	0.59	0.03	0.06	679	1,225
Known		478.36	982.54	48.34	99.29	1,724	3,542
Unknown	1,214.46	1,085.07	1,610.82	109.65	162.78	903	1,340
Total		1,563.43	2,593.35	157.99	262.07	1,057	1,753

¹Incidence per 10,000 residents.

TABLE A24. *Minnesota Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.21	0.35	0.04	0.06	195	320
<i>Brucella</i> spp.	0.02	0.28	0.38	0.05	0.07	21,242	28,959
<i>Campylobacter</i> spp.	26.73	33.37	176.29	6.16	32.52	2,303	12,167
<i>Clostridium botulinum</i>	<0.01	1.63	2.09	0.30	0.39	1,720,446	2,207,584
<i>Clostridium perfringens</i>	30.56	8.15	10.78	1.50	1.99	492	651
STEC O157:H7	5.28	37.14	39.48	6.85	7.28	12,990	13,807
STEC non-0157	9.42	5.55	9.94	1.02	1.83	1,086	1,947
ETEC	0.57	0.32	0.59	0.06	0.11	1,047	1,907
Other diarrheogenic <i>E. coli</i> ,	0.38	0.22	0.39	0.04	0.07	1,046	1,910
<i>Listeria monocytogenes</i>	0.03	22.49	22.73	4.15	4.19	1,647,322	1,664,410
<i>Salmonella</i> , spp., Nontyphoidal	26.30	77.70	229.82	14.33	42.40	5,450	16,121
<i>S. enterica</i> serotype Typhi	0.05	0.11	0.40	0.02	0.07	4,477	15,917
<i>Shigella</i> , spp	2.38	3.13	18.52	0.58	3.42	2,430	14,369
<i>Staphylococcus aureus</i>	7.63	2.76	3.94	0.51	0.73	667	953
Streptococcus spp. Group A	0.36	0.32	0.59	0.06	0.11	1,644	3,046
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,802	3,130
<i>Vibrio vulnificus</i>	<0.01	3.81	3.81	0.70	0.70	3,639,431	3,641,853
<i>Vibrio parahaemolyticus</i>	0.70	0.93	1.34	0.17	0.25	2,452	3,539
<i>Vibrio</i> spp., other	0.35	1.09	1.30	0.20	0.24	5,679	6,766
<i>Yersinia enterocolitica</i>	3.09	8.82	27.84	1.63	5.14	5,266	16,626
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	4.00	5.52	8.93	1.02	1.65	2,546	4,118
<i>Cyclospora cayetanensis</i>	0.09	0.06	0.11	0.01	0.02	1,161	2,120
<i>Giardia intestinalis</i>	5.86	9.35	16.69	1.73	3.08	2,945	5,256
<i>Toxoplasma gondii</i>	2.74	68.47	79.26	12.63	14.62	46,069	53,324
<i>Trichinella</i> spp.	<0.01	0.03	0.06	0.01	0.01	11,428	21,541
<u>Viral</u>							
Astrovirus	0.49	0.26	0.47	0.05	0.09	996	1,766
Hepatitis A virus	0.03	0.84	0.88	0.16	0.16	46,570	48,683
Norovirus	172.77	61.39	85.94	11.33	15.85	656	918
Rotavirus	0.49	0.26	0.43	0.05	0.08	974	1,618
Sapovirus	0.49	0.22	0.39	0.04	0.07	838	1,493
Known		354.43	743.71	65.39	137.21	2,159	4,531
Unknown	1,214.46	727.83	1,073.42	134.28	198.03	1,106	1,631
Total		1,082.26	1,817.13	199.67	335.24	1,316	2,210

¹Incidence per 10,000 residents.

TABLE A25. *Mississippi Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.08	0.13	0.03	0.04	132	210
<i>Brucella</i> spp.	0.01	0.06	0.08	0.02	0.03	13,997	18,783
<i>Campylobacter</i> spp.	26.73	11.78	59.76	3.94	19.98	1,473	7,474
<i>Clostridium botulinum</i>	<0.01	0.57	0.73	0.19	0.24	1,093,257	1,389,481
<i>Clostridium perfringens</i>	30.56	2.85	3.75	0.95	1.26	312	411
STEC O157:H7	0.69	1.71	1.82	0.57	0.61	8,234	8,746
STEC non-0157	1.24	0.25	0.45	0.08	0.15	671	1,208
ETEC	0.57	0.11	0.20	0.04	0.07	628	1,165
Other diarrheogenic <i>E. coli</i> ,	0.38	0.07	0.13	0.02	0.04	627	1,166
<i>Listeria monocytogenes</i>	0.02	6.93	7.01	2.32	2.34	1,028,656	1,040,450
<i>Salmonella</i> , spp., Nontyphoidal	76.02	78.76	226.47	26.33	75.71	3,464	9,960
<i>S. enterica</i> serotype Typhi	0.01	0.01	0.03	<0.01	0.01	3,734	10,707
<i>Shigella</i> , spp	7.12	3.24	18.70	1.08	6.25	1,522	8,787
<i>Staphylococcus aureus</i>	7.63	0.99	1.40	0.33	0.47	435	614
Streptococcus spp. Group A	0.36	0.10	0.20	0.03	0.07	964	1,839
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,166	1,995
<i>Vibrio vulnificus</i>	<0.01	2.76	2.76	0.92	0.92	2,229,050	2,230,552
<i>Vibrio parahaemolyticus</i>	1.49	0.66	0.97	0.22	0.32	1,489	2,167
<i>Vibrio</i> spp., other	0.76	0.78	0.93	0.26	0.31	3,447	4,125
<i>Yersinia enterocolitica</i>	3.09	2.93	9.33	0.98	3.12	3,174	10,101
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.83	0.38	0.63	0.13	0.21	1,528	2,508
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	695	1,294
<i>Giardia intestinalis</i>	2.11	1.10	2.01	0.37	0.67	1,735	3,176
<i>Toxoplasma gondii</i>	2.74	24.07	27.77	8.05	9.28	29,351	33,852
<i>Trichinella</i> spp.	<0.01	0.01	0.02	<0.01	0.01	6,929	13,227
<u>Viral</u>							
Astrovirus	0.49	0.09	0.16	0.03	0.05	626	1,106
Hepatitis A virus	0.02	0.19	0.19	0.06	0.07	28,818	30,135
Norovirus	172.77	22.04	30.50	7.37	10.20	427	590
Rotavirus	0.49	0.10	0.16	0.03	0.05	668	1,071
Sapovirus	0.49	0.08	0.14	0.03	0.05	521	930
Known		162.70	396.41	54.39	132.53	1,606	3,914
Unknown	1,214.46	250.41	369.40	83.71	123.49	689	1,017
Total		413.10	765.81	138.11	256.02	889	1,648

¹Incidence per 10,000 residents.

TABLE A26. *Missouri Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.20	0.33	0.03	0.05	166	268
<i>Brucella</i> spp.	0.01	0.16	0.22	0.03	0.04	18,326	24,648
<i>Campylobacter</i> spp.	26.73	31.39	160.93	5.19	26.63	1,943	9,961
<i>Clostridium botulinum</i>	<0.01	1.53	1.94	0.25	0.32	1,442,546	1,838,413
<i>Clostridium perfringens</i>	30.56	7.51	9.92	1.24	1.64	407	537
STEC O157:H7	3.87	25.43	27.00	4.21	4.47	10,867	11,539
STEC non-0157	6.91	3.75	6.70	0.62	1.11	897	1,604
ETEC	0.57	0.29	0.53	0.05	0.09	848	1,555
Other diarrheogenic <i>E. coli</i> ,	0.38	0.19	0.36	0.03	0.06	848	1,556
<i>Listeria monocytogenes</i>	0.03	28.32	28.63	4.69	4.74	1,364,664	1,379,296
<i>Salmonella</i> , spp., Nontyphoidal	28.65	79.26	229.49	13.11	37.97	4,577	13,253
<i>S. enterica</i> serotype Typhi	0.02	0.05	0.15	0.01	0.03	4,569	13,875
<i>Shigella</i> , spp	7.58	9.29	53.77	1.54	8.90	2,026	11,731
<i>Staphylococcus aureus</i>	7.63	2.61	3.69	0.43	0.61	566	801
Streptococcus spp. Group A	0.36	0.28	0.53	0.05	0.09	1,317	2,468
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,537	2,628
<i>Vibrio vulnificus</i>	<0.01	1.36	1.36	0.22	0.22	2,974,269	2,976,253
<i>Vibrio parahaemolyticus</i>	0.27	0.33	0.48	0.05	0.08	2,000	2,893
<i>Vibrio</i> spp., other	0.14	0.39	0.46	0.06	0.08	4,620	5,512
<i>Yersinia enterocolitica</i>	3.09	7.99	25.24	1.32	4.18	4,278	13,520
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	3.03	3.79	6.16	0.63	1.02	2,068	3,359
<i>Cyclospora cayetanensis</i>	0.06	0.03	0.06	0.01	0.01	939	1,727
<i>Giardia intestinalis</i>	2.79	4.00	7.20	0.66	1.19	2,371	4,268
<i>Toxoplasma gondii</i>	2.74	64.22	74.07	10.63	12.26	38,750	44,693
<i>Trichinella</i> spp.	<0.01	0.03	0.05	<0.01	0.01	9,392	17,689
<u>Viral</u>							
Astrovirus	0.49	0.25	0.43	0.04	0.07	832	1,464
Hepatitis A virus	0.02	0.53	0.56	0.09	0.09	38,329	40,063
Norovirus	172.77	58.03	80.50	9.60	13.32	556	771
Rotavirus	0.49	0.25	0.41	0.04	0.07	863	1,392
Sapovirus	0.49	0.20	0.36	0.03	0.06	694	1,232
Known		331.67	721.53	54.87	119.38	1,819	3,957
Unknown	1,214.46	671.85	988.25	111.16	163.50	915	1,346
Total		1,003.52	1,709.78	166.03	282.88	1,095	1,866

¹Incidence per 10,000 residents.

TABLE A27. *Montana Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.03	0.05	0.03	0.05	160	251
<i>Brucella</i> spp.	<0.01	<0.01	<0.01	<0.01	<0.01	15,766	21,405
<i>Campylobacter</i> spp.	26.73	4.70	24.44	4.63	24.07	1,731	9,006
<i>Clostridium botulinum</i>	<0.01	0.23	0.29	0.22	0.28	1,268,747	1,628,112
<i>Clostridium perfringens</i>	30.56	1.18	1.54	1.16	1.52	380	496
STEC O157:H7	3.19	3.12	3.31	3.07	3.26	9,618	10,213
STEC non-0157	5.70	0.48	0.84	0.47	0.83	833	1,460
ETEC	0.57	0.05	0.08	0.05	0.08	805	1,432
Other diarrheogenic <i>E. coli</i> ,	0.38	0.03	0.06	0.03	0.05	804	1,433
<i>Listeria monocytogenes</i>	0.02	2.44	2.46	2.40	2.42	1,215,998	1,227,790
<i>Salmonella</i> , spp., Nontyphoidal	25.90	10.67	31.36	10.51	30.89	4,060	11,927
<i>S. enterica</i> serotype Typhi	<0.01	<0.01	0.01	<0.01	0.01	3,321	11,750
<i>Shigella</i> , spp	1.82	0.34	1.96	0.33	1.93	1,833	10,637
<i>Staphylococcus aureus</i>	7.63	0.40	0.56	0.39	0.55	511	720
Streptococcus spp. Group A	0.36	0.05	0.08	0.04	0.08	1,258	2,279
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,374	2,342
<i>Vibrio vulnificus</i>	<0.01	0.77	0.77	0.76	0.76	2,687,003	2,688,774
<i>Vibrio parahaemolyticus</i>	1.02	0.19	0.27	0.19	0.27	1,846	2,638
<i>Vibrio</i> spp., other	0.52	0.22	0.26	0.22	0.26	4,230	5,021
<i>Yersinia enterocolitica</i>	3.09	1.24	3.86	1.22	3.80	3,942	12,311
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	4.44	0.87	1.38	0.85	1.36	1,921	3,066
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	892	1,591
<i>Giardia intestinalis</i>	3.38	0.77	1.34	0.75	1.32	2,231	3,915
<i>Toxoplasma gondii</i>	2.74	9.49	10.96	9.34	10.80	34,074	39,374
<i>Trichinella</i> spp.	<0.01	<0.01	0.01	<0.01	0.01	8,643	16,017
<u>Viral</u>							
Astrovirus	0.49	0.04	0.07	0.04	0.06	763	1,323
Hepatitis A virus	0.03	0.10	0.10	0.10	0.10	34,456	35,996
Norovirus	172.77	8.79	12.13	8.65	11.95	501	692
Rotavirus	0.49	0.04	0.06	0.04	0.06	743	1,212
Sapovirus	0.49	0.03	0.06	0.03	0.05	644	1,121
Known		46.24	98.32	45.55	96.85	1,548	3,291
Unknown	1,214.46	103.41	150.56	101.87	148.31	839	1,221
Total		149.65	248.88	147.41	245.16	977	1,625

¹Incidence per 10,000 residents.

TABLE A28. *Nebraska Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.06	0.10	0.03	0.06	173	278
<i>Brucella</i> spp.	0.04	0.15	0.21	0.08	0.11	18,414	24,941
<i>Campylobacter</i> spp.	26.73	9.95	51.80	5.33	27.72	1,993	10,370
<i>Clostridium botulinum</i>	<0.01	0.48	0.62	0.26	0.33	1,473,952	1,887,705
<i>Clostridium perfringens</i>	30.56	2.43	3.19	1.30	1.71	426	560
STEC O157:H7	6.26	13.04	13.84	6.98	7.41	11,137	11,827
STEC non-0157	11.18	1.97	3.49	1.06	1.87	943	1,671
ETEC	0.57	0.10	0.17	0.05	0.09	906	1,633
Other diarrheogenic <i>E. coli</i> ,	0.38	0.06	0.12	0.03	0.06	905	1,634
<i>Listeria monocytogenes</i>	0.04	11.53	11.64	6.17	6.23	1,407,288	1,421,384
<i>Salmonella</i> , spp., Nontyphoidal	27.96	24.52	71.87	13.12	38.46	4,693	13,754
<i>S. enterica</i> serotype Typhi	0.04	0.03	0.10	0.02	0.05	4,070	13,781
<i>Shigella</i> , spp	4.05	1.59	9.26	0.85	4.96	2,102	12,241
<i>Staphylococcus aureus</i>	7.63	0.83	1.17	0.44	0.63	580	822
Streptococcus spp. Group A	0.36	0.09	0.17	0.05	0.09	1,418	2,602
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,575	2,697
<i>Vibrio vulnificus</i>	<0.01	1.64	1.64	0.88	0.88	3,097,768	3,099,817
<i>Vibrio parahaemolyticus</i>	1.02	0.40	0.58	0.22	0.31	2,106	3,024
<i>Vibrio</i> spp., other	0.52	0.47	0.56	0.25	0.30	4,849	5,766
<i>Yersinia enterocolitica</i>	3.09	2.60	8.17	1.39	4.37	4,510	14,153
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	5.04	2.06	3.31	1.10	1.77	2,191	3,518
<i>Cyclospora cayetanensis</i>	0.05	0.01	0.02	<0.01	0.01	1,004	1,814
<i>Giardia intestinalis</i>	3.19	1.51	2.68	0.81	1.43	2,535	4,487
<i>Toxoplasma gondii</i>	2.74	20.28	23.42	10.85	12.53	39,573	45,708
<i>Trichinella</i> spp.	<0.01	0.01	0.02	<0.01	0.01	9,890	18,435
<u>Viral</u>							
Astrovirus	0.49	0.08	0.14	0.04	0.07	867	1,517
Hepatitis A virus	0.04	0.29	0.30	0.15	0.16	39,747	41,532
Norovirus	172.77	18.40	25.54	9.85	13.67	570	791
Rotavirus	0.49	0.08	0.13	0.04	0.07	859	1,403
Sapovirus	0.49	0.07	0.12	0.04	0.06	728	1,282
Known		114.74	234.37	61.41	125.43	1,995	4,076
Unknown	1,214.46	216.70	317.32	115.97	169.82	955	1,398
Total		331.43	551.69	177.38	295.25	1,165	1,940

¹Incidence per 10,000 residents.

TABLE A29. *Nevada Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.09	0.15	0.03	0.05	164	262
<i>Brucella</i> spp.	0.02	0.09	0.12	0.03	0.04	18,084	24,103
<i>Campylobacter</i> spp.	26.73	14.18	71.16	5.08	25.51	1,901	9,542
<i>Clostridium botulinum</i>	<0.01	0.68	0.87	0.24	0.31	1,398,549	1,775,827
<i>Clostridium perfringens</i>	30.56	3.36	4.42	1.20	1.58	394	518
STEC O157:H7	1.52	4.47	4.74	1.60	1.70	10,533	11,172
STEC non-0157	2.72	0.66	1.17	0.24	0.42	874	1,546
ETEC	0.57	0.13	0.24	0.05	0.08	818	1,491
Other diarrheogenic <i>E. coli</i> ,	0.38	0.09	0.16	0.03	0.06	818	1,493
<i>Listeria monocytogenes</i>	0.03	10.29	10.40	3.69	3.73	1,314,993	1,328,859
<i>Salmonella</i> , spp., Nontyphoidal	17.11	21.27	60.74	7.62	21.77	4,456	12,724
<i>S. enterica</i> serotype Typhi	0.03	0.04	0.11	0.01	0.04	4,850	13,718
<i>Shigella</i> , spp	2.22	1.22	6.94	0.44	2.49	1,975	11,224
<i>Staphylococcus aureus</i>	7.63	1.18	1.66	0.42	0.59	556	780
Streptococcus spp. Group A	0.36	0.13	0.23	0.04	0.08	1,263	2,359
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,520	2,558
<i>Vibrio vulnificus</i>	<0.01	1.19	1.19	0.43	0.43	2,844,907	2,846,796
<i>Vibrio parahaemolyticus</i>	0.54	0.29	0.42	0.10	0.15	1,925	2,775
<i>Vibrio</i> spp., other	0.27	0.34	0.40	0.12	0.14	4,422	5,272
<i>Yersinia enterocolitica</i>	3.09	3.54	11.13	1.27	3.99	4,104	12,910
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.52	0.29	0.46	0.10	0.17	1,991	3,220
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	906	1,656
<i>Giardia intestinalis</i>	1.50	0.95	1.70	0.34	0.61	2,277	4,083
<i>Toxoplasma gondii</i>	2.74	28.83	33.16	10.33	11.88	37,683	43,341
<i>Trichinella</i> spp.	<0.01	0.01	0.02	<0.01	0.01	9,120	17,020
<u>Viral</u>							
Astrovirus	0.49	0.11	0.19	0.04	0.07	815	1,417
Hepatitis A virus	0.03	0.30	0.32	0.11	0.11	36,824	38,475
Norovirus	172.77	26.30	36.17	9.43	12.97	546	750
Rotavirus	0.49	0.12	0.19	0.04	0.07	868	1,371
Sapovirus	0.49	0.09	0.16	0.03	0.06	677	1,189
Known		120.25	248.65	43.10	89.12	1,568	3,243
Unknown	1,214.46	301.03	440.07	107.89	157.72	888	1,299
Total		421.29	688.72	150.99	246.84	1,014	1,657

¹Incidence per 10,000 residents.

TABLE A30. *New Hampshire Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.05	0.09	0.04	0.07	196	339
<i>Brucella</i> spp.	0.01	0.03	0.04	0.02	0.03	22,263	31,039
<i>Campylobacter</i> spp.	26.73	8.47	46.86	6.40	35.41	2,393	13,246
<i>Clostridium botulinum</i>	<0.01	0.43	0.56	0.33	0.42	1,865,921	2,401,413
<i>Clostridium perfringens</i>	30.56	2.09	2.83	1.58	2.14	517	699
STEC O157:H7	2.80	5.20	5.54	3.93	4.19	14,029	14,972
STEC non-0157	5.00	0.72	1.37	0.54	1.03	1,082	2,072
ETEC	0.57	0.08	0.15	0.06	0.12	1,043	2,033
Other diarrheogenic <i>E. coli</i> ,	0.38	0.05	0.10	0.04	0.08	1,043	2,035
<i>Listeria monocytogenes</i>	0.07	15.98	16.18	12.07	12.23	1,790,840	1,814,016
<i>Salmonella</i> , spp., Nontyphoidal	28.48	21.75	66.05	16.44	49.90	5,772	17,526
<i>S. enterica</i> serotype Typhi	0.04	0.02	0.09	0.02	0.07	4,439	17,068
<i>Shigella</i> , spp	0.63	0.21	1.30	0.16	0.99	2,491	15,633
<i>Staphylococcus aureus</i>	7.63	0.70	1.03	0.53	0.78	689	1,017
Streptococcus spp. Group A	0.36	0.08	0.15	0.06	0.12	1,639	3,249
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,794	3,321
<i>Vibrio vulnificus</i>	<0.01	1.21	1.21	0.91	0.92	3,977,260	3,980,012
<i>Vibrio parahaemolyticus</i>	0.83	0.28	0.42	0.21	0.32	2,552	3,801
<i>Vibrio</i> spp., other	0.42	0.34	0.41	0.26	0.31	6,083	7,332
<i>Yersinia enterocolitica</i>	3.09	2.26	7.39	1.71	5.58	5,524	18,071
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	3.12	1.07	1.82	0.81	1.37	2,601	4,407
<i>Cyclospora cayetanensis</i>	0.13	0.02	0.04	0.01	0.03	1,157	2,259
<i>Giardia intestinalis</i>	2.44	0.95	1.81	0.72	1.37	2,956	5,611
<i>Toxoplasma gondii</i>	2.74	17.93	20.92	13.55	15.81	49,398	57,651
<i>Trichinella</i> spp.	<0.01	0.01	0.01	0.01	0.01	11,370	22,953
<u>Viral</u>							
Astrovirus	0.49	0.06	0.12	0.05	0.09	992	1,877
Hepatitis A virus	0.06	0.38	0.39	0.28	0.30	50,589	53,011
Norovirus	172.77	15.54	22.43	11.74	16.95	680	981
Rotavirus	0.49	0.06	0.11	0.05	0.08	969	1,710
Sapovirus	0.49	0.05	0.10	0.04	0.08	835	1,588
Known		96.01	199.53	72.54	150.77	2,482	5,158
Unknown	1,214.46	183.75	280.69	138.84	212.09	1,143	1,746
Total		279.76	480.22	211.38	362.85	1,403	2,408

¹Incidence per 10,000 residents.

TABLE A31. *New Jersey Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.36	0.61	0.04	0.07	202	342
<i>Brucella</i> spp.	0.01	0.21	0.29	0.02	0.03	23,770	32,328
<i>Campylobacter</i> spp.	26.73	59.47	313.17	6.68	35.19	2,500	13,165
<i>Clostridium botulinum</i>	<0.01	2.97	3.79	0.33	0.43	1,904,200	2,430,501
<i>Clostridium perfringens</i>	30.56	14.14	18.96	1.59	2.13	520	697
STEC O157:H7	1.60	20.32	21.62	2.28	2.43	14,299	15,216
STEC non-0157	2.85	2.85	5.30	0.32	0.60	1,125	2,087
ETEC	0.57	0.54	1.02	0.06	0.11	1,062	2,025
Other diarrheogenic <i>E. coli</i> ,	0.38	0.36	0.68	0.04	0.08	1,062	2,027
<i>Listeria monocytogenes</i>	0.08	132.98	134.58	14.94	15.12	1,803,506	1,825,268
<i>Salmonella</i> , spp., Nontyphoidal	26.78	142.01	417.19	15.96	46.88	5,959	17,505
<i>S. enterica</i> serotype Typhi	0.14	0.72	2.27	0.08	0.26	5,794	18,194
<i>Shigella</i> , spp	4.03	9.29	55.58	1.04	6.25	2,590	15,502
<i>Staphylococcus aureus</i>	7.63	4.89	7.06	0.55	0.79	720	1,040
Streptococcus spp. Group A	0.36	0.52	1.02	0.06	0.11	1,653	3,220
<i>Vibrio cholerae</i> , toxigenic	<0.01	0.01	0.01	<0.01	<0.01	1,932	3,417
<i>Vibrio vulnificus</i>	<0.01	11.93	11.93	1.34	1.34	3,941,778	3,944,463
<i>Vibrio parahaemolyticus</i>	1.23	2.81	4.14	0.32	0.47	2,575	3,791
<i>Vibrio</i> spp., other	0.62	3.35	4.02	0.38	0.45	6,050	7,265
<i>Yersinia enterocolitica</i>	3.09	15.23	49.10	1.71	5.52	5,541	17,859
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.42	0.99	1.64	0.11	0.18	2,640	4,397
<i>Cyclospora cayetanensis</i>	0.58	0.61	1.16	0.07	0.13	1,177	2,250
<i>Giardia intestinalis</i>	1.84	4.91	9.14	0.55	1.03	2,998	5,581
<i>Toxoplasma gondii</i>	2.74	124.07	143.71	13.94	16.15	50,843	58,890
<i>Trichinella</i> spp.	<0.01	0.05	0.10	0.01	0.01	11,843	23,119
<u>Viral</u>							
Astrovirus	0.49	0.45	0.83	0.05	0.09	1,045	1,905
Hepatitis A virus	0.06	2.51	2.63	0.28	0.30	50,608	52,966
Norovirus	172.77	109.09	154.15	12.26	17.32	710	1,003
Rotavirus	0.49	0.47	0.78	0.05	0.09	1,085	1,805
Sapovirus	0.49	0.38	0.70	0.04	0.08	870	1,602
Known		668.49	1,367.19	75.12	153.63	2,603	5,324
Unknown	1,214.46	1,265.93	1,900.06	142.25	213.51	1,171	1,758
Total		1,934.42	3,267.25	217.37	367.13	1,446	2,443

¹Incidence per 10,000 residents.

TABLE A32. *New Mexico Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.06	0.10	0.03	0.05	151	241
<i>Brucella</i> spp.	0.05	0.15	0.21	0.07	0.10	15,965	21,521
<i>Campylobacter</i> spp.	26.73	9.49	48.73	4.55	23.37	1,703	8,742
<i>Clostridium botulinum</i>	<0.01	0.46	0.59	0.22	0.28	1,261,473	1,609,021
<i>Clostridium perfringens</i>	30.56	2.31	3.04	1.11	1.46	363	477
STEC O157:H7	2.45	4.87	5.17	2.34	2.48	9,516	10,107
STEC non-0157	4.38	0.72	1.29	0.35	0.62	789	1,411
ETEC	0.57	0.09	0.16	0.04	0.08	748	1,369
Other diarrheogenic <i>E. coli</i> ,	0.38	0.06	0.11	0.03	0.05	748	1,371
<i>Listeria monocytogenes</i>	0.05	12.18	12.32	5.84	5.91	1,195,057	1,207,991
<i>Salmonella</i> , spp., Nontyphoidal	33.85	28.28	82.04	13.56	39.34	4,006	11,623
<i>S. enterica</i> serotype Typhi	0.02	0.01	0.04	0.01	0.02	3,926	12,097
<i>Shigella</i> , spp	5.67	2.10	12.18	1.01	5.84	1,775	10,296
<i>Staphylococcus aureus</i>	7.63	0.80	1.12	0.38	0.54	500	707
Streptococcus spp. Group A	0.36	0.09	0.16	0.04	0.08	1,159	2,171
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,347	2,306
<i>Vibrio vulnificus</i>	<0.01	0.40	0.40	0.19	0.19	2,608,860	2,610,604
<i>Vibrio parahaemolyticus</i>	0.26	0.10	0.14	0.05	0.07	1,757	2,542
<i>Vibrio</i> spp., other	0.13	0.11	0.13	0.05	0.06	4,057	4,841
<i>Yersinia enterocolitica</i>	3.09	2.42	7.64	1.16	3.67	3,753	11,867
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	3.40	1.29	2.09	0.62	1.00	1,814	2,948
<i>Cyclospora cayetanensis</i>	0.27	0.05	0.09	0.02	0.04	829	1,521
<i>Giardia intestinalis</i>	1.69	0.73	1.32	0.35	0.63	2,078	3,746
<i>Toxoplasma gondii</i>	2.74	19.36	22.35	9.29	10.72	33,864	39,087
<i>Trichinella</i> spp.	<0.01	0.01	0.02	<0.01	0.01	8,205	15,499
<u>Viral</u>							
Astrovirus	0.49	0.07	0.13	0.04	0.06	731	1,287
Hepatitis A virus	0.03	0.23	0.24	0.11	0.12	33,610	35,134
Norovirus	172.77	17.68	24.49	8.48	11.75	491	680
Rotavirus	0.49	0.08	0.12	0.04	0.06	755	1,220
Sapovirus	0.49	0.06	0.11	0.03	0.05	611	1,084
Known		104.25	226.54	49.99	108.64	1,663	3,615
Unknown	1,214.46	204.07	300.04	97.86	143.88	806	1,185
Total		308.32	526.58	147.86	252.52	976	1,667

¹Incidence per 10,000 residents.

TABLE A33. *New York Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.79	1.11	0.04	0.06	200	282
<i>Brucella</i> spp.	0.01	0.47	0.60	0.02	0.03	19,059	24,326
<i>Campylobacter</i> spp.	26.73	110.87	507.56	5.64	25.83	2,111	9,663
<i>Clostridium botulinum</i>	<0.01	4.78	6.06	0.24	0.31	1,389,265	1,763,326
<i>Clostridium perfringens</i>	30.56	26.45	32.69	1.35	1.66	440	544
STEC O157:H7	1.66	34.70	36.43	1.77	1.85	10,631	11,159
STEC non-0157	2.97	6.41	9.70	0.33	0.49	1,100	1,664
ETEC	0.57	1.17	1.80	0.06	0.09	1,055	1,619
Other diarrheogenic <i>E. coli</i> ,	0.38	0.79	1.21	0.04	0.06	1,055	1,621
<i>Listeria monocytogenes</i>	0.09	233.26	233.84	11.87	11.90	1,316,799	1,320,031
<i>Salmonella</i> , spp., Nontyphoidal	29.05	270.05	734.77	13.74	37.39	4,730	12,871
<i>S. enterica</i> serotype Typhi	0.15	1.36	3.83	0.07	0.19	4,776	13,439
<i>Shigella</i> , spp	3.21	14.47	71.98	0.74	3.66	2,298	11,425
<i>Staphylococcus aureus</i>	7.63	9.38	12.18	0.48	0.62	626	813
Streptococcus spp. Group A	0.36	1.15	1.79	0.06	0.09	1,652	2,572
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,838	2,707
<i>Vibrio vulnificus</i>	<0.01	5.21	5.21	0.27	0.27	2,852,140	2,853,800
<i>Vibrio parahaemolyticus</i>	0.34	1.46	1.93	0.07	0.10	2,219	2,932
<i>Vibrio</i> spp., other	0.17	1.58	1.82	0.08	0.09	4,734	5,446
<i>Yersinia enterocolitica</i>	3.09	28.27	80.41	1.44	4.09	4,657	13,246
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.72	8.17	11.65	0.42	0.59	2,413	3,444
<i>Cyclospora cayetanensis</i>	0.89	2.05	3.15	0.10	0.16	1,170	1,799
<i>Giardia intestinalis</i>	4.06	23.20	35.31	1.18	1.80	2,904	4,420
<i>Toxoplasma gondii</i>	2.74	207.66	234.29	10.57	11.92	38,538	43,480
<i>Trichinella</i> spp.	<0.01	0.11	0.18	0.01	0.01	11,540	18,260
<u>Viral</u>							
Astrovirus	0.49	0.97	1.45	0.05	0.07	1,011	1,515
Hepatitis A virus	0.06	4.44	4.61	0.23	0.23	37,279	38,677
Norovirus	172.77	206.70	264.89	10.52	13.48	609	780
Rotavirus	0.49	0.96	1.37	0.05	0.07	1,003	1,423
Sapovirus	0.49	0.81	1.23	0.04	0.06	849	1,278
Known		1,207.71	2,303.06	61.46	117.20	2,100	4,004
Unknown	1,214.46	2,443.90	3,266.16	124.36	166.21	1,024	1,369
Total		3,651.61	5,569.22	185.82	283.40	1,233	1,880

¹Incidence per 10,000 residents.

TABLE A34. *North Carolina Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.31	0.47	0.03	0.05	158	239
<i>Brucella</i> spp.	0.02	0.24	0.31	0.02	0.03	15,627	20,664
<i>Campylobacter</i> spp.	26.73	44.90	221.22	4.56	22.46	1,706	8,404
<i>Clostridium botulinum</i>	<0.01	2.07	2.64	0.21	0.27	1,202,956	1,534,089
<i>Clostridium perfringens</i>	30.56	10.97	14.04	1.11	1.43	364	467
STEC O157:H7	1.62	14.62	15.46	1.48	1.57	9,138	9,662
STEC non-0157	2.90	2.40	3.98	0.24	0.40	838	1,393
ETEC	0.57	0.45	0.76	0.05	0.08	802	1,357
Other diarrheogenic <i>E. coli</i> ,	0.38	0.30	0.51	0.03	0.05	802	1,358
<i>Listeria monocytogenes</i>	0.05	52.46	52.85	5.33	5.37	1,143,432	1,151,917
<i>Salmonella</i> , spp., Nontyphoidal	40.35	156.23	443.76	15.86	45.06	3,932	11,169
<i>S. enterica</i> serotype Typhi	0.03	0.11	0.34	0.01	0.03	3,732	11,470
<i>Shigella</i> , spp	2.97	5.31	29.00	0.54	2.95	1,817	9,919
<i>Staphylococcus aureus</i>	7.63	3.79	5.17	0.38	0.53	505	689
Streptococcus spp. Group A	0.36	0.44	0.75	0.04	0.08	1,251	2,154
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,405	2,261
<i>Vibrio vulnificus</i>	<0.01	5.80	5.80	0.59	0.59	2,497,177	2,498,761
<i>Vibrio parahaemolyticus</i>	0.85	1.50	2.09	0.15	0.21	1,788	2,489
<i>Vibrio</i> spp., other	0.43	1.70	1.99	0.17	0.20	3,994	4,694
<i>Yersinia enterocolitica</i>	3.09	11.53	34.89	1.17	3.54	3,791	11,470
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.79	1.48	2.27	0.15	0.23	1,889	2,901
<i>Cyclospora cayetanensis</i>	0.11	0.09	0.16	0.01	0.02	889	1,507
<i>Giardia intestinalis</i>	2.12	4.62	7.73	0.47	0.78	2,216	3,705
<i>Toxoplasma gondii</i>	2.74	88.30	101.08	8.97	10.26	32,698	37,430
<i>Trichinella</i> spp.	<0.01	0.04	0.07	<0.01	0.01	8,731	15,274
<u>Viral</u>							
Astrovirus	0.49	0.37	0.61	0.04	0.06	772	1,267
Hepatitis A virus	0.03	1.09	1.13	0.11	0.11	32,307	33,672
Norovirus	172.77	83.90	112.60	8.52	11.43	493	662
Rotavirus	0.49	0.37	0.57	0.04	0.06	772	1,187
Sapovirus	0.49	0.31	0.51	0.03	0.05	648	1,070
Known		495.70	1,062.80	50.33	107.92	1,675	3,591
Unknown	1,214.46	981.73	1,386.35	99.69	140.77	821	1,159
Total		1,477.43	2,449.15	150.02	248.69	990	1,642

¹Incidence per 10,000 residents.

TABLE A35. *North Dakota Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.03	0.04	0.04	0.06	183	295
<i>Brucella</i> spp.	0.02	0.03	0.04	0.04	0.05	18,982	25,908
<i>Campylobacter</i> spp.	26.73	4.03	21.28	5.57	29.42	2,084	11,006
<i>Clostridium botulinum</i>	<0.01	0.20	0.25	0.27	0.35	1,543,530	1,984,253
<i>Clostridium perfringens</i>	30.56	1.00	1.32	1.38	1.82	453	595
STEC O157:H7	4.19	3.54	3.76	4.89	5.20	11,684	12,415
STEC non-0157	7.47	0.54	0.96	0.75	1.32	999	1,770
ETEC	0.57	0.04	0.07	0.05	0.10	969	1,740
Other diarrheogenic <i>E. coli</i> ,	0.38	0.03	0.05	0.04	0.07	969	1,742
<i>Listeria monocytogenes</i>	0.04	4.05	4.09	5.60	5.66	1,483,512	1,498,133
<i>Salmonella</i> , spp., Nontyphoidal	19.68	6.99	20.73	9.67	28.66	4,914	14,564
<i>S. enterica</i> serotype Typhi	0.03	0.01	0.03	0.01	0.04	3,790	14,130
<i>Shigella</i> , spp	3.33	0.53	3.13	0.74	4.33	2,211	13,009
<i>Staphylococcus aureus</i>	7.63	0.34	0.48	0.46	0.66	608	864
Streptococcus spp. Group A	0.36	0.04	0.07	0.05	0.10	1,524	2,779
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,639	2,828
<i>Vibrio vulnificus</i>	<0.01	0.75	0.75	1.04	1.04	3,289,576	3,291,751
<i>Vibrio parahaemolyticus</i>	1.14	0.18	0.27	0.26	0.37	2,241	3,214
<i>Vibrio</i> spp., other	0.58	0.22	0.26	0.30	0.35	5,164	6,137
<i>Yersinia enterocolitica</i>	3.09	1.07	3.37	1.48	4.66	4,806	15,072
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	3.36	0.57	0.91	0.78	1.26	2,334	3,741
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	1,075	1,934
<i>Giardia intestinalis</i>	2.07	0.41	0.72	0.56	0.99	2,714	4,782
<i>Toxoplasma gondii</i>	2.74	8.21	9.50	11.34	13.13	41,370	47,880
<i>Trichinella</i> spp.	<0.01	<0.01	0.01	0.01	0.01	10,466	19,528
<u>Viral</u>							
Astrovirus	0.49	0.03	0.06	0.04	0.08	913	1,601
Hepatitis A virus	0.01	0.04	0.04	0.05	0.06	42,060	43,952
Norovirus	172.77	7.46	10.39	10.31	14.36	597	831
Rotavirus	0.49	0.03	0.05	0.04	0.07	876	1,452
Sapovirus	0.49	0.03	0.05	0.04	0.07	771	1,357
Known		40.38	82.65	55.82	114.26	1,923	3,937
Unknown	1,214.46	88.73	130.02	122.66	179.74	1,010	1,480
Total		129.12	212.68	178.49	294.00	1,186	1,954

¹Incidence per 10,000 residents.

TABLE A36. *Ohio Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.39	0.59	0.03	0.05	167	253
<i>Brucella</i> spp.	0.01	0.20	0.26	0.02	0.02	17,053	22,397
<i>Campylobacter</i> spp.	26.73	57.07	277.51	4.93	23.98	1,845	8,973
<i>Clostridium botulinum</i>	<0.01	2.62	3.34	0.23	0.29	1,296,073	1,648,463
<i>Clostridium perfringens</i>	30.56	13.69	17.52	1.18	1.51	387	495
STEC O157:H7	1.96	22.26	23.52	1.92	2.03	9,834	10,389
STEC non-0157	3.49	3.65	6.02	0.32	0.52	903	1,490
ETEC	0.57	0.56	0.95	0.05	0.08	859	1,447
Other diarrheogenic <i>E. coli</i> ,	0.38	0.38	0.64	0.03	0.05	859	1,448
<i>Listeria monocytogenes</i>	0.06	78.38	78.95	6.77	6.82	1,226,627	1,235,413
<i>Salmonella</i> , spp., Nontyphoidal	24.27	119.22	335.46	10.30	28.99	4,245	11,945
<i>S. enterica</i> serotype Typhi	0.03	0.16	0.48	0.01	0.04	4,287	12,519
<i>Shigella</i> , spp	4.72	10.71	57.76	0.93	4.99	1,962	10,584
<i>Staphylococcus aureus</i>	7.63	4.80	6.52	0.41	0.56	543	738
Streptococcus spp. Group A	0.36	0.55	0.94	0.05	0.08	1,338	2,295
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,529	2,435
<i>Vibrio vulnificus</i>	<0.01	2.54	2.54	0.22	0.22	2,664,931	2,666,611
<i>Vibrio parahaemolyticus</i>	0.30	0.66	0.91	0.06	0.08	1,915	2,658
<i>Vibrio</i> spp., other	0.15	0.74	0.87	0.06	0.08	4,263	5,005
<i>Yersinia enterocolitica</i>	3.09	14.50	43.70	1.25	3.78	4,058	12,227
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	3.44	8.06	12.33	0.70	1.07	2,027	3,101
<i>Cyclospora cayetanensis</i>	0.01	0.02	0.03	<0.01	<0.01	952	1,607
<i>Giardia intestinalis</i>	2.51	6.90	11.48	0.60	0.99	2,378	3,956
<i>Toxoplasma gondii</i>	2.74	112.04	127.97	9.68	11.06	35,313	40,333
<i>Trichinella</i> spp.	<0.01	0.05	0.09	<0.01	0.01	9,440	16,378
<u>Viral</u>							
Astrovirus	0.49	0.47	0.77	0.04	0.07	834	1,360
Hepatitis A virus	0.03	1.15	1.20	0.10	0.10	34,570	36,017
Norovirus	172.77	106.18	141.93	9.18	12.27	531	710
Rotavirus	0.49	0.48	0.73	0.04	0.06	848	1,287
Sapovirus	0.49	0.39	0.65	0.03	0.06	698	1,145
Known		568.84	1,155.65	49.16	99.88	1,700	3,453
Unknown	1,214.46	1238.60	1,742.49	107.05	150.59	881	1,240
Total		1,807.44	2,898.14	156.21	250.47	1,039	1,666

¹Incidence per 10,000 residents.

TABLE A37. *Oklahoma Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.12	0.20	0.03	0.05	153	257
<i>Brucella</i> spp.	0.01	0.09	0.13	0.02	0.03	16,992	23,322
<i>Campylobacter</i> spp.	26.73	18.57	99.25	4.82	25.78	1,804	9,643
<i>Clostridium botulinum</i>	<0.01	0.93	1.19	0.24	0.31	1,382,510	1,769,303
<i>Clostridium perfringens</i>	30.56	4.54	6.09	1.18	1.58	386	517
STEC O157:H7	2.32	9.28	9.89	2.41	2.57	10,395	11,075
STEC non-0157	4.14	1.30	2.43	0.34	0.63	813	1,526
ETEC	0.57	0.17	0.32	0.04	0.08	772	1,485
Other diarrheogenic <i>E. coli</i> ,	0.38	0.11	0.22	0.03	0.06	772	1,487
<i>Listeria monocytogenes</i>	0.03	16.99	17.21	4.41	4.47	1,314,679	1,331,274
<i>Salmonella</i> , spp., Nontyphoidal	35.87	59.53	176.79	15.46	45.91	4,310	12,799
<i>S. enterica</i> serotype Typhi	0.02	0.03	0.09	0.01	0.02	3,936	13,057
<i>Shigella</i> , spp	9.92	7.13	43.40	1.85	11.27	1,867	11,359
<i>Staphylococcus aureus</i>	7.63	1.54	2.24	0.40	0.58	525	762
Streptococcus spp. Group A	0.36	0.16	0.32	0.04	0.08	1,200	2,361
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,381	2,482
<i>Vibrio vulnificus</i>	<0.01	0.71	0.71	0.19	0.19	2,888,007	2,889,992
<i>Vibrio parahaemolyticus</i>	0.23	0.17	0.25	0.04	0.06	1,874	2,775
<i>Vibrio</i> spp., other	0.12	0.20	0.24	0.05	0.06	4,426	5,326
<i>Yersinia enterocolitica</i>	3.09	4.80	15.57	1.25	4.04	4,032	13,094
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.72	1.27	2.13	0.33	0.55	1,911	3,213
<i>Cyclospora cayetanensis</i>	0.01	<0.01	0.01	<0.01	<0.01	856	1,650
<i>Giardia intestinalis</i>	1.23	1.02	1.92	0.27	0.50	2,165	4,079
<i>Toxoplasma gondii</i>	2.74	38.84	45.13	10.09	11.72	36,787	42,739
<i>Trichinella</i> spp.	<0.01	0.02	0.03	<0.01	0.01	8,473	16,823
<u>Viral</u>							
Astrovirus	0.49	0.14	0.26	0.04	0.07	752	1,390
Hepatitis A virus	0.02	0.24	0.26	0.06	0.07	36,984	38,730
Norovirus	172.77	34.38	48.82	8.93	12.68	517	734
Rotavirus	0.49	0.14	0.25	0.04	0.06	769	1,304
Sapovirus	0.49	0.12	0.22	0.03	0.06	629	1,172
Known		202.56	475.58	52.60	123.51	1,731	4,064
Unknown	1,214.46	398.46	601.78	103.48	156.28	852	1,287
Total		601.02	1,077.36	156.09	279.79	1,028	1,843

¹Incidence per 10,000 residents.

TABLE A38. *Oregon Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.14	0.22	0.03	0.06	172	278
<i>Brucella</i> spp.	0.02	0.12	0.17	0.03	0.04	18,083	24,606
<i>Campylobacter</i> spp.	26.73	20.59	108.00	5.24	27.48	1,960	10,280
<i>Clostridium botulinum</i>	<0.01	1.00	1.29	0.26	0.33	1,457,957	1,868,849
<i>Clostridium perfringens</i>	30.56	5.07	6.68	1.29	1.70	422	556
STEC O157:H7	3.75	16.24	17.26	4.13	4.39	11,015	11,707
STEC non-0157	6.70	2.43	4.35	0.62	1.11	923	1,651
ETEC	0.57	0.20	0.36	0.05	0.09	887	1,615
Other diarrheogenic <i>E. coli</i> ,	0.38	0.13	0.24	0.03	0.06	887	1,617
<i>Listeria monocytogenes</i>	0.05	29.43	29.74	7.49	7.57	1,393,429	1,408,044
<i>Salmonella</i> , spp., Nontyphoidal	22.21	40.38	118.96	10.27	30.27	4,626	13,628
<i>S. enterica</i> serotype Typhi	0.04	0.06	0.21	0.02	0.05	3,936	13,588
<i>Shigella</i> , spp	1.88	1.53	8.98	0.39	2.28	2,062	12,133
<i>Staphylococcus aureus</i>	7.63	1.72	2.44	0.44	0.62	572	814
Streptococcus spp. Group A	0.36	0.19	0.36	0.05	0.09	1,387	2,573
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,539	2,662
<i>Vibrio vulnificus</i>	<0.01	5.26	5.26	1.34	1.34	3,072,100	3,074,148
<i>Vibrio parahaemolyticus</i>	1.57	1.28	1.85	0.33	0.47	2,073	2,993
<i>Vibrio</i> spp., other	0.80	1.50	1.79	0.38	0.46	4,795	5,714
<i>Yersinia enterocolitica</i>	3.09	5.39	17.03	1.37	4.33	4,443	14,027
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	2.37	2.00	3.24	0.51	0.82	2,148	3,478
<i>Cyclospora cayetanensis</i>	0.10	0.04	0.07	0.01	0.02	984	1,795
<i>Giardia intestinalis</i>	3.87	3.77	6.75	0.96	1.72	2,480	4,434
<i>Toxoplasma gondii</i>	2.74	42.09	48.70	10.71	12.39	39,059	45,191
<i>Trichinella</i> spp.	<0.01	0.02	0.04	<0.01	0.01	9,646	18,198
<u>Viral</u>							
Astrovirus	0.49	0.16	0.29	0.04	0.07	848	1,499
Hepatitis A virus	0.04	0.56	0.58	0.14	0.15	39,373	41,160
Norovirus	172.77	38.16	53.21	9.71	13.54	562	784
Rotavirus	0.49	0.16	0.27	0.04	0.07	838	1,383
Sapovirus	0.49	0.14	0.24	0.03	0.06	713	1,267
Known		219.77	438.56	55.92	111.59	1,917	3,825
Unknown	1,214.46	448.68	660.60	114.17	168.09	940	1,384
Total		668.45	1,099.16	170.09	279.68	1,129	1,857

¹Incidence per 10,000 residents.

TABLE A39. *Pennsylvania Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.45	0.72	0.04	0.06	176	281
<i>Brucella</i> spp.	0.01	0.22	0.30	0.02	0.02	19,147	25,622
<i>Campylobacter</i> spp.	26.73	69.84	354.24	5.47	27.73	2,046	10,375
<i>Clostridium botulinum</i>	<0.01	3.35	4.27	0.26	0.33	1,497,561	1,908,964
<i>Clostridium perfringens</i>	30.56	16.73	21.91	1.31	1.72	429	561
STEC O157:H7	1.60	23.08	24.48	1.81	1.92	11,305	11,989
STEC non-0157	2.85	3.51	6.13	0.27	0.48	962	1,683
ETEC	0.57	0.66	1.18	0.05	0.09	913	1,634
Other diarrheogenic <i>E. coli</i> ,	0.38	0.44	0.79	0.03	0.06	913	1,636
<i>Listeria monocytogenes</i>	0.09	155.76	157.27	12.19	12.31	1,418,793	1,432,585
<i>Salmonella</i> , spp., Nontyphoidal	30.01	183.65	528.95	14.38	41.41	4,791	13,800
<i>S. enterica</i> serotype Typhi	0.05	0.28	0.86	0.02	0.07	4,703	14,356
<i>Shigella</i> , spp	2.60	7.14	40.65	0.56	3.18	2,148	12,228
<i>Staphylococcus aureus</i>	7.63	5.81	8.14	0.46	0.64	597	836
Streptococcus spp. Group A	0.36	0.64	1.18	0.05	0.09	1,422	2,595
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,637	2,749
<i>Vibrio vulnificus</i>	<0.01	3.53	3.54	0.28	0.28	3,094,399	3,096,432
<i>Vibrio parahaemolyticus</i>	0.32	0.87	1.25	0.07	0.10	2,119	3,029
<i>Vibrio</i> spp., other	0.16	1.01	1.20	0.08	0.09	4,847	5,757
<i>Yersinia enterocolitica</i>	3.09	17.85	55.67	1.40	4.36	4,523	14,108
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	2.49	7.03	11.22	0.55	0.88	2,207	3,523
<i>Cyclospora cayetanensis</i>	0.78	1.01	1.82	0.08	0.14	1,012	1,815
<i>Giardia intestinalis</i>	2.38	7.76	13.66	0.61	1.07	2,549	4,484
<i>Toxoplasma gondii</i>	2.74	141.40	162.72	11.07	12.74	40,368	46,454
<i>Trichinella</i> spp.	<0.01	0.06	0.12	<0.01	0.01	10,083	18,557
<u>Viral</u>							
Astrovirus	0.49	0.56	0.96	0.04	0.07	890	1,535
Hepatitis A virus	0.06	2.98	3.12	0.23	0.24	39,913	41,682
Norovirus	172.77	129.15	177.57	10.11	13.90	585	805
Rotavirus	0.49	0.57	0.90	0.04	0.07	912	1,451
Sapovirus	0.49	0.46	0.81	0.04	0.06	744	1,292
Known		785.83	1,585.62	61.52	124.13	2,109	4,255
Unknown	1,214.46	1,503.34	2,185.26	117.69	171.07	969	1,409
Total		2,289.17	3,770.87	179.21	295.20	1,190	1,960

¹Incidence per 10,000 residents.

TABLE A40. *Rhode Island Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.04	0.06	0.04	0.06	189	301
<i>Brucella</i> spp.	0.01	0.01	0.02	0.01	0.02	19,877	26,781
<i>Campylobacter</i> spp.	26.73	6.08	31.25	5.78	29.72	2,162	11,120
<i>Clostridium botulinum</i>	<0.01	0.29	0.37	0.28	0.35	1,579,040	2,021,614
<i>Clostridium perfringens</i>	30.56	1.48	1.94	1.41	1.84	462	603
STEC O157:H7	1.37	1.72	1.83	1.64	1.74	11,950	12,676
STEC non-0157	2.45	0.27	0.46	0.25	0.44	1,037	1,803
ETEC	0.57	0.06	0.10	0.06	0.10	997	1,763
Other diarrheogenic <i>E. coli</i> ,	0.38	0.04	0.07	0.04	0.07	997	1,765
<i>Listeria monocytogenes</i>	0.08	13.18	13.30	12.53	12.65	1,508,047	1,521,959
<i>Salmonella</i> , spp., Nontyphoidal	28.53	15.19	44.25	14.45	42.09	5,063	14,749
<i>S. enterica</i> serotype Typhi	0.05	0.02	0.08	0.02	0.08	4,395	14,769
<i>Shigella</i> , spp	1.33	0.32	1.84	0.30	1.75	2,290	13,130
<i>Staphylococcus aureus</i>	7.63	0.51	0.71	0.48	0.68	631	885
Streptococcus spp. Group A	0.36	0.06	0.10	0.06	0.10	1,562	2,810
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,727	2,909
<i>Vibrio vulnificus</i>	<0.01	1.20	1.20	1.14	1.14	3,317,938	3,320,107
<i>Vibrio parahaemolyticus</i>	1.24	0.30	0.43	0.28	0.40	2,289	3,257
<i>Vibrio</i> spp., other	0.63	0.35	0.41	0.33	0.39	5,227	6,194
<i>Yersinia enterocolitica</i>	3.09	1.59	4.93	1.51	4.69	4,892	15,191
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.19	0.30	0.47	0.28	0.45	2,393	3,792
<i>Cyclospora cayetanensis</i>	0.16	0.02	0.03	0.02	0.03	1,105	1,959
<i>Giardia intestinalis</i>	3.48	1.02	1.77	0.97	1.68	2,785	4,842
<i>Toxoplasma gondii</i>	2.74	12.26	14.13	11.66	13.44	42,527	49,015
<i>Trichinella</i> spp.	<0.01	0.01	0.01	0.01	0.01	10,870	19,887
<u>Viral</u>							
Astrovirus	0.49	0.05	0.08	0.05	0.08	952	1,637
Hepatitis A virus	0.06	0.26	0.27	0.25	0.26	42,628	44,511
Norovirus	172.77	11.24	15.48	10.69	14.72	619	852
Rotavirus	0.49	0.05	0.08	0.05	0.07	939	1,512
Sapovirus	0.49	0.04	0.07	0.04	0.07	800	1,383
Known		67.95	135.77	64.62	129.12	2,237	4,470
Unknown	1,214.46	132.67	192.36	126.17	182.94	1,039	1,506
Total		200.62	328.13	190.79	312.06	1,269	2,076

¹Incidence per 10,000 residents.

TABLE A41. *South Carolina Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.14	0.23	0.03	0.05	147	242
<i>Brucella</i> spp.	0.02	0.16	0.21	0.03	0.04	16,305	22,125
<i>Campylobacter</i> spp.	26.73	21.85	113.96	4.58	23.87	1,712	8,928
<i>Clostridium botulinum</i>	<0.01	1.08	1.38	0.23	0.29	1,298,151	1,654,222
<i>Clostridium perfringens</i>	30.56	5.27	7.03	1.10	1.47	361	482
STEC O157:H7	0.58	2.71	2.88	0.57	0.60	9,756	10,380
STEC non-0157	1.04	0.38	0.71	0.08	0.15	768	1,423
ETEC	0.57	0.19	0.37	0.04	0.08	721	1,376
Other diarrheogenic <i>E. coli</i> ,	0.38	0.13	0.25	0.03	0.05	721	1,378
<i>Listeria monocytogenes</i>	0.04	24.32	24.62	5.09	5.16	1,225,716	1,240,884
<i>Salmonella</i> , spp., Nontyphoidal	55.63	108.05	315.64	22.63	66.10	4,067	11,882
<i>S. enterica</i> serotype Typhi	0.01	0.01	0.04	<0.01	0.01	4,151	12,546
<i>Shigella</i> , spp	3.71	3.13	18.62	0.66	3.90	1,765	10,502
<i>Staphylococcus aureus</i>	7.63	1.82	2.62	0.38	0.55	500	718
Streptococcus spp. Group A	0.36	0.19	0.37	0.04	0.08	1,113	2,180
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,329	2,340
<i>Vibrio vulnificus</i>	<0.01	3.76	3.76	0.79	0.79	2,669,739	2,671,564
<i>Vibrio parahaemolyticus</i>	1.06	0.89	1.31	0.19	0.27	1,745	2,573
<i>Vibrio</i> spp., other	0.54	1.05	1.27	0.22	0.27	4,094	4,921
<i>Yersinia enterocolitica</i>	3.09	5.52	17.82	1.16	3.73	3,741	12,081
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.17	1.00	1.67	0.21	0.35	1,781	2,977
<i>Cyclospora cayetanensis</i>	0.16	0.06	0.12	0.01	0.03	799	1,529
<i>Giardia intestinalis</i>	0.95	0.92	1.72	0.19	0.36	2,013	3,771
<i>Toxoplasma gondii</i>	2.74	45.40	52.56	9.51	11.01	34,671	40,144
<i>Trichinella</i> spp.	<0.01	0.02	0.04	<0.01	0.01	7,985	15,661
<u>Viral</u>							
Astrovirus	0.49	0.17	0.30	0.03	0.06	715	1,301
Hepatitis A virus	0.03	0.46	0.48	0.10	0.10	34,359	35,964
Norovirus	172.77	40.56	57.03	8.50	11.94	492	691
Rotavirus	0.49	0.18	0.29	0.04	0.06	756	1,247
Sapovirus	0.49	0.14	0.25	0.03	0.05	595	1,094
Known		269.57	627.56	56.46	131.43	1,802	4,196
Unknown	1,214.46	464.35	696.07	97.25	145.78	801	1,200
Total		733.92	1,323.63	153.71	277.21	1,006	1,815

¹Incidence per 10,000 residents.

TABLE A42. *South Dakota Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
Bacterial							
<i>Bacillus cereus</i>	2.01	0.03	0.04	0.03	0.05	159	263
<i>Brucella</i> spp.	0.01	0.01	0.02	0.01	0.02	16,716	23,110
<i>Campylobacter</i> spp.	26.73	4.09	22.12	4.84	26.18	1,809	9,794
<i>Clostridium botulinum</i>	<0.01	0.20	0.26	0.24	0.31	1,381,602	1,775,650
<i>Clostridium perfringens</i>	30.56	1.02	1.37	1.21	1.62	397	529
STEC O157:H7	6.97	6.13	6.53	7.26	7.73	10,419	11,103
STEC non-0157	12.44	0.88	1.63	1.04	1.93	834	1,552
ETEC	0.57	0.04	0.07	0.05	0.09	803	1,521
Other diarrheogenic <i>E. coli</i> ,	0.38	0.03	0.05	0.03	0.06	803	1,523
<i>Listeria monocytogenes</i>	0.03	2.89	2.93	3.42	3.47	1,324,110	1,340,194
<i>Salmonella</i> , spp., Nontyphoidal	40.16	14.66	43.99	17.35	52.07	4,320	12,964
<i>S. enterica</i> serotype Typhi	0.03	0.01	0.03	0.01	0.04	3,459	12,741
<i>Shigella</i> , spp	7.43	1.19	7.25	1.40	8.58	1,889	11,556
<i>Staphylococcus aureus</i>	7.63	0.34	0.49	0.40	0.59	529	768
Streptococcus spp. Group A	0.36	0.04	0.07	0.04	0.09	1,254	2,424
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,383	2,492
<i>Vibrio vulnificus</i>	<0.01	0.70	0.70	0.83	0.83	2,933,155	2,935,160
<i>Vibrio parahaemolyticus</i>	1.02	0.17	0.24	0.20	0.29	1,922	2,829
<i>Vibrio</i> spp., other	0.52	0.20	0.24	0.23	0.28	4,524	5,431
<i>Yersinia enterocolitica</i>	3.09	1.08	3.49	1.28	4.13	4,135	13,355
Parasitic							
<i>Cryptosporidium</i> spp.	9.09	1.51	2.52	1.79	2.98	1,967	3,278
<i>Cyclospora cayetanensis</i>	0.07	<0.01	0.01	0.01	0.01	890	1,691
<i>Giardia intestinalis</i>	4.47	0.85	1.58	1.00	1.87	2,246	4,174
<i>Toxoplasma gondii</i>	2.74	8.51	9.90	10.07	11.72	36,730	42,742
<i>Trichinella</i> spp.	<0.01	<0.01	0.01	<0.01	0.01	8,666	17,086
Viral							
Astrovirus	0.49	0.03	0.06	0.04	0.07	765	1,407
Hepatitis A virus	0.02	0.05	0.05	0.06	0.06	37,432	39,192
Norovirus	172.77	7.59	10.79	8.99	12.77	520	739
Rotavirus	0.49	0.03	0.05	0.04	0.06	752	1,290
Sapovirus	0.49	0.03	0.05	0.03	0.06	644	1,191
Known		52.30	116.55	61.91	137.95	1,873	4,173
Unknown	1,214.46	89.09	134.04	105.45	158.65	868	1,306
Total		141.39	250.58	167.35	296.59	1,083	1,920

¹Incidence per 10,000 residents.

TABLE A43. *Tennessee Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.20	0.31	0.03	0.05	151	239
<i>Brucella</i> spp.	0.01	0.11	0.15	0.02	0.02	15,860	21,304
<i>Campylobacter</i> spp.	26.73	29.50	150.39	4.54	23.15	1,699	8,661
<i>Clostridium botulinum</i>	<0.01	1.42	1.81	0.22	0.28	1,247,518	1,591,352
<i>Clostridium perfringens</i>	30.56	7.17	9.39	1.10	1.45	361	473
STEC O157:H7	2.01	12.30	13.05	1.89	2.01	9,422	9,999
STEC non-0157	3.59	1.86	3.27	0.29	0.50	797	1,404
ETEC	0.57	0.28	0.50	0.04	0.08	757	1,364
Other diarrheogenic <i>E. coli</i> ,	0.38	0.19	0.34	0.03	0.05	757	1,366
<i>Listeria monocytogenes</i>	0.04	27.78	28.06	4.28	4.32	1,182,846	1,194,853
<i>Salmonella</i> , spp., Nontyphoidal	29.71	76.87	222.24	11.83	34.21	3,983	11,514
<i>S. enterica</i> serotype Typhi	0.01	0.04	0.11	0.01	0.02	3,865	11,939
<i>Shigella</i> , spp	4.39	5.08	29.12	0.78	4.48	1,780	10,206
<i>Staphylococcus aureus</i>	7.63	2.47	3.47	0.38	0.53	499	701
Streptococcus spp. Group A	0.36	0.27	0.50	0.04	0.08	1,175	2,164
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,354	2,291
<i>Vibrio vulnificus</i>	<0.01	3.00	3.00	0.46	0.46	2,583,056	2,584,765
<i>Vibrio parahaemolyticus</i>	0.65	0.74	1.06	0.11	0.16	1,760	2,527
<i>Vibrio</i> spp., other	0.33	0.86	1.02	0.13	0.16	4,039	4,805
<i>Yersinia enterocolitica</i>	3.09	7.54	23.62	1.16	3.64	3,755	11,773
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.86	1.02	1.64	0.16	0.25	1,826	2,934
<i>Cyclospora cayetanensis</i>	0.17	0.09	0.17	0.01	0.03	839	1,515
<i>Giardia intestinalis</i>	1.26	1.72	3.05	0.26	0.47	2,103	3,733
<i>Toxoplasma gondii</i>	2.74	59.79	68.91	9.20	10.61	33,568	38,685
<i>Trichinella</i> spp.	<0.01	0.03	0.05	<0.01	0.01	8,298	15,431
<u>Viral</u>							
Astrovirus	0.49	0.23	0.41	0.04	0.06	737	1,280
Hepatitis A virus	0.05	0.99	1.03	0.15	0.16	33,297	34,787
Norovirus	172.77	54.91	75.65	8.45	11.65	489	674
Rotavirus	0.49	0.24	0.38	0.04	0.06	755	1,209
Sapovirus	0.49	0.20	0.34	0.03	0.05	617	1,079
Known		296.88	643.07	45.70	98.99	1,569	3,398
Unknown	1,214.46	636.43	928.51	97.97	142.94	807	1,177
Total		933.32	1,571.57	143.68	241.93	954	1,607

¹Incidence per 10,000 residents.

TABLE A44. *Texas Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.90	1.47	0.03	0.06	169	277
<i>Brucella</i> spp.	0.06	3.05	4.13	0.12	0.16	18,688	25,309
<i>Campylobacter</i> spp.	26.73	140.60	731.50	5.32	27.66	1,989	10,347
<i>Clostridium botulinum</i>	<0.01	6.89	8.80	0.26	0.33	1,489,275	1,901,903
<i>Clostridium perfringens</i>	30.56	33.92	44.96	1.28	1.70	420	556
STEC O157:H7	1.20	35.58	37.82	1.35	1.43	11,218	11,923
STEC non-0157	2.14	5.19	9.39	0.20	0.35	916	1,657
ETEC	0.57	1.30	2.41	0.05	0.09	869	1,611
Other diarrheogenic <i>E. coli</i> ,	0.38	0.87	1.62	0.03	0.06	869	1,613
<i>Listeria monocytogenes</i>	0.03	114.76	116.03	4.34	4.39	1,413,287	1,429,017
<i>Salmonella</i> , spp., Nontyphoidal	31.82	395.93	1,157.22	14.97	43.75	4,704	13,750
<i>S. enterica</i> serotype Typhi	0.05	0.58	1.84	0.02	0.07	4,472	14,177
<i>Shigella</i> , spp	7.98	43.78	257.35	1.66	9.73	2,074	12,192
<i>Staphylococcus aureus</i>	7.63	11.67	16.64	0.44	0.63	579	825
Streptococcus spp. Group A	0.36	1.27	2.40	0.05	0.09	1,353	2,560
<i>Vibrio cholerae</i> , toxigenic	<0.01	0.01	0.02	<0.01	<0.01	1,559	2,703
<i>Vibrio vulnificus</i>	<0.01	24.07	24.09	0.91	0.91	3,092,718	3,094,795
<i>Vibrio parahaemolyticus</i>	1.06	5.80	8.43	0.22	0.32	2,063	2,999
<i>Vibrio</i> spp., other	0.54	6.82	8.15	0.26	0.31	4,792	5,728
<i>Yersinia enterocolitica</i>	3.09	36.12	114.88	1.37	4.34	4,421	14,060
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.34	7.52	12.31	0.28	0.47	2,127	3,481
<i>Cyclospora cayetanensis</i>	0.20	0.50	0.93	0.02	0.04	964	1,790
<i>Giardia intestinalis</i>	2.12	13.64	24.78	0.52	0.94	2,435	4,425
<i>Toxoplasma gondii</i>	2.74	289.33	334.47	10.94	12.65	39,894	46,119
<i>Trichinella</i> spp.	<0.01	0.13	0.24	<0.01	0.01	9,588	18,287
<u>Viral</u>							
Astrovirus	0.49	1.09	1.95	0.04	0.07	848	1,511
Hepatitis A virus	0.06	5.87	6.14	0.22	0.23	39,750	41,568
Norovirus	172.77	259.81	362.96	9.82	13.72	569	794
Rotavirus	0.49	1.12	1.84	0.04	0.07	868	1,423
Sapovirus	0.49	0.91	1.64	0.03	0.06	708	1,273
Known		1,449.03	3,296.43	54.79	124.64	1,845	4,198
Unknown	1,214.46	3,019.98	4,472.19	114.18	169.09	940	1,392
Total		4,469.01	7,768.62	168.97	293.73	1,118	1,943

¹Incidence per 10,000 residents.

TABLE A45. *Utah Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.10	0.17	0.03	0.06	167	295
<i>Brucella</i> spp.	0.02	0.13	0.18	0.05	0.06	19,036	26,792
<i>Campylobacter</i> spp.	26.73	15.74	88.73	5.43	30.59	2,030	11,443
<i>Clostridium botulinum</i>	<0.01	0.82	1.06	0.28	0.36	1,615,590	2,079,766
<i>Clostridium perfringens</i>	30.56	3.92	5.36	1.35	1.85	443	605
STEC O157:H7	4.44	15.61	16.70	5.38	5.76	12,121	12,962
STEC non-0157	7.93	2.06	4.08	0.71	1.41	894	1,773
ETEC	0.57	0.14	0.29	0.05	0.10	858	1,737
Other diarrheogenic <i>E. coli</i> ,	0.38	0.09	0.19	0.03	0.07	858	1,739
<i>Listeria monocytogenes</i>	0.02	8.46	8.58	2.92	2.96	1,548,869	1,571,185
<i>Salmonella</i> , spp., Nontyphoidal	21.27	30.47	93.41	10.50	32.20	4,939	15,140
<i>S. enterica</i> serotype Typhi	0.02	0.03	0.10	0.01	0.03	3,841	14,816
<i>Shigella</i> , spp	1.16	0.70	4.53	0.24	1.56	2,091	13,492
<i>Staphylococcus aureus</i>	7.63	1.30	1.94	0.45	0.67	586	878
Streptococcus spp. Group A	0.36	0.14	0.29	0.05	0.10	1,341	2,773
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,491	2,848
<i>Vibrio vulnificus</i>	<0.01	0.26	0.26	0.09	0.09	3,440,376	3,442,807
<i>Vibrio parahaemolyticus</i>	0.09	0.06	0.09	0.02	0.03	2,151	3,261
<i>Vibrio</i> spp., other	0.05	0.07	0.09	0.02	0.03	5,204	6,314
<i>Yersinia enterocolitica</i>	3.09	4.18	13.96	1.44	4.81	4,667	15,574
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	6.29	3.95	6.87	1.36	2.37	2,165	3,769
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	951	1,931
<i>Giardia intestinalis</i>	4.35	3.07	6.05	1.06	2.08	2,429	4,788
<i>Toxoplasma gondii</i>	2.74	33.84	39.64	11.66	13.66	42,537	49,833
<i>Trichinella</i> spp.	<0.01	0.01	0.03	<0.01	0.01	9,328	19,604
<u>Viral</u>							
Astrovirus	0.49	0.12	0.23	0.04	0.08	821	1,607
Hepatitis A virus	0.03	0.35	0.37	0.12	0.13	43,693	45,843
Norovirus	172.77	29.01	42.44	10.00	14.63	579	847
Rotavirus	0.49	0.12	0.21	0.04	0.07	813	1,472
Sapovirus	0.49	0.10	0.19	0.03	0.07	690	1,360
Known		154.85	336.02	53.38	115.84	1,816	3,940
Unknown	1,214.46	339.92	528.74	117.18	182.27	965	1,501
Total		494.77	864.77	170.56	298.11	1,131	1,976

¹Incidence per 10,000 residents.

TABLE A46. *Vermont Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.02	0.04	0.04	0.06	188	297
<i>Brucella</i> spp.	<0.01	<0.01	<0.01	<0.01	<0.01	19,314	26,097
<i>Campylobacter</i> spp.	26.73	3.56	18.42	5.68	29.40	2,125	10,998
<i>Clostridium botulinum</i>	<0.01	0.17	0.22	0.27	0.35	1,546,136	1,984,568
<i>Clostridium perfringens</i>	30.56	0.88	1.14	1.40	1.82	459	597
STEC O157:H7	4.11	3.02	3.20	4.81	5.11	11,723	12,434
STEC non-0157	7.33	0.48	0.82	0.76	1.31	1,035	1,786
ETEC	0.57	0.04	0.06	0.06	0.10	1,003	1,753
Other diarrheogenic <i>E. coli</i> ,	0.38	0.02	0.04	0.04	0.07	1,002	1,755
<i>Listeria monocytogenes</i>	0.06	5.67	5.72	9.05	9.13	1,483,928	1,496,874
<i>Salmonella</i> , spp., Nontyphoidal	27.40	8.54	25.01	13.63	39.91	4,973	14,564
<i>S. enterica</i> serotype Typhi	0.01	<0.01	0.01	<0.01	0.01	3,974	14,240
<i>Shigella</i> , spp	0.67	0.09	0.54	0.15	0.87	2,266	13,002
<i>Staphylococcus aureus</i>	7.63	0.30	0.42	0.47	0.66	621	870
Streptococcus spp. Group A	0.36	0.04	0.06	0.06	0.10	1,577	2,800
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,700	2,858
<i>Vibrio vulnificus</i>	<0.01	0.19	0.19	0.30	0.30	3,281,605	3,283,736
<i>Vibrio parahaemolyticus</i>	0.33	0.05	0.07	0.08	0.11	2,282	3,230
<i>Vibrio</i> spp., other	0.17	0.05	0.06	0.09	0.10	5,195	6,143
<i>Yersinia enterocolitica</i>	3.09	0.94	2.92	1.51	4.65	4,878	15,069
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	6.76	1.01	1.59	1.62	2.54	2,395	3,766
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	1,112	1,949
<i>Giardia intestinalis</i>	10.23	1.80	3.09	2.87	4.93	2,802	4,818
<i>Toxoplasma gondii</i>	2.74	7.16	8.25	11.42	13.17	41,651	48,025
<i>Trichinella</i> spp.	<0.01	<0.01	0.01	0.01	0.01	10,854	19,698
<u>Viral</u>							
Astrovirus	0.49	0.03	0.05	0.05	0.08	946	1,617
Hepatitis A virus	0.03	0.08	0.08	0.13	0.13	42,075	43,921
Norovirus	172.77	6.59	9.06	10.51	14.46	609	837
Rotavirus	0.49	0.03	0.04	0.04	0.07	909	1,471
Sapovirus	0.49	0.02	0.04	0.04	0.07	798	1,369
Known		40.77	81.16	65.07	129.51	2,131	4,241
Unknown	1,214.46	78.47	113.33	125.22	180.85	1,031	1,489
Total		119.24	194.48	190.29	310.36	1,252	2,042

¹Incidence per 10,000 residents.

TABLE A47. *Virginia Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.32	0.54	0.04	0.07	194	329
<i>Brucella</i> spp.	0.01	0.13	0.19	0.02	0.02	21,714	29,972
<i>Campylobacter</i> spp.	26.73	51.63	279.88	6.25	33.88	2,338	12,676
<i>Clostridium botulinum</i>	<0.01	2.59	3.33	0.31	0.40	1,791,327	2,301,543
<i>Clostridium perfringens</i>	30.56	12.67	16.99	1.53	2.06	502	673
STEC O157:H7	2.12	23.57	25.11	2.85	3.04	13,488	14,371
STEC non-0157	3.78	3.35	6.24	0.41	0.76	1,074	2,001
ETEC	0.57	0.48	0.92	0.06	0.11	1,034	1,961
Other diarrheogenic <i>E. coli</i> ,	0.38	0.32	0.61	0.04	0.07	1,034	1,963
<i>Listeria monocytogenes</i>	0.04	58.43	59.12	7.07	7.16	1,716,126	1,736,645
<i>Salmonella</i> , spp., Nontyphoidal	30.58	141.34	424.06	17.11	51.34	5,595	16,785
<i>S. enterica</i> serotype Typhi	0.08	0.31	1.13	0.04	0.14	4,494	16,508
<i>Shigella</i> , spp	2.43	4.91	30.04	0.59	3.64	2,445	14,960
<i>Staphylococcus aureus</i>	7.63	4.25	6.19	0.51	0.75	675	983
Streptococcus spp. Group A	0.36	0.48	0.92	0.06	0.11	1,622	3,132
<i>Vibrio cholerae</i> , toxigenic	<0.01	0.01	0.01	<0.01	<0.01	1,786	3,217
<i>Vibrio vulnificus</i>	<0.01	14.61	14.62	1.77	1.77	3,799,765	3,802,356
<i>Vibrio parahaemolyticus</i>	1.68	3.45	5.07	0.42	0.61	2,485	3,656
<i>Vibrio</i> spp., other	0.85	4.12	4.94	0.50	0.60	5,856	7,026
<i>Yersinia enterocolitica</i>	3.09	13.68	44.13	1.66	5.34	5,362	17,295
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.88	1.85	3.07	0.22	0.37	2,552	4,244
<i>Cyclospora cayetanensis</i>	0.11	0.10	0.20	0.01	0.02	1,146	2,180
<i>Giardia intestinalis</i>	1.96	4.73	8.77	0.57	1.06	2,919	5,408
<i>Toxoplasma gondii</i>	2.74	107.93	125.52	13.07	15.20	47,649	55,414
<i>Trichinella</i> spp.	<0.01	0.05	0.09	0.01	0.01	11,286	22,156
<u>Viral</u>							
Astrovirus	0.49	0.40	0.73	0.05	0.09	986	1,815
Hepatitis A virus	0.04	1.64	1.71	0.20	0.21	48,470	50,743
Norovirus	172.77	94.89	135.19	11.49	16.37	665	947
Rotavirus	0.49	0.39	0.67	0.05	0.08	968	1,662
Sapovirus	0.49	0.33	0.62	0.04	0.07	829	1,534
Known		552.95	1,200.62	66.94	145.35	2,286	4,963
Unknown	1,214.46	1,121.25	1,688.43	135.74	204.40	1,118	1,683
Total		1,674.20	2,889.05	202.68	349.75	1,345	2,320

¹Incidence per 10,000 residents.

TABLE A48. *Washington Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.27	0.45	0.04	0.06	192	320
<i>Brucella</i> spp.	0.01	0.13	0.18	0.02	0.03	20,877	28,747
<i>Campylobacter</i> spp.	26.73	42.23	227.53	6.06	32.64	2,266	12,210
<i>Clostridium botulinum</i>	<0.01	2.10	2.70	0.30	0.39	1,718,293	2,209,194
<i>Clostridium perfringens</i>	30.56	10.44	13.90	1.50	1.99	490	652
STEC O157:H7	3.37	30.47	32.44	4.37	4.65	12,963	13,801
STEC non-0157	6.02	4.44	8.14	0.64	1.17	1,058	1,939
ETEC	0.57	0.40	0.75	0.06	0.11	1,022	1,903
Other diarrheogenic <i>E. coli</i> ,	0.38	0.27	0.50	0.04	0.07	1,022	1,905
<i>Listeria monocytogenes</i>	0.06	64.26	64.98	9.22	9.32	1,649,263	1,667,880
<i>Salmonella</i> , spp., Nontyphoidal	21.84	82.21	246.08	11.79	35.30	5,399	16,160
<i>S. enterica</i> serotype Typhi	0.06	0.19	0.71	0.03	0.10	4,213	15,759
<i>Shigella</i> , spp	1.61	2.67	16.15	0.38	2.32	2,383	14,420
<i>Staphylococcus aureus</i>	7.63	3.49	5.05	0.50	0.72	657	949
Streptococcus spp. Group A	0.36	0.40	0.75	0.06	0.11	1,605	3,040
<i>Vibrio cholerae</i> , toxigenic	0.01	0.01	0.01	<0.01	<0.01	1,746	3,106
<i>Vibrio vulnificus</i>	0.01	19.00	19.01	2.73	2.73	3,656,955	3,659,425
<i>Vibrio parahaemolyticus</i>	2.69	4.55	6.63	0.65	0.95	2,424	3,537
<i>Vibrio</i> spp., other	1.36	5.39	6.45	0.77	0.92	5,671	6,783
<i>Yersinia enterocolitica</i>	3.09	11.24	35.93	1.61	5.15	5,219	16,686
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	1.09	1.89	3.11	0.27	0.45	2,500	4,109
<i>Cyclospora cayetanensis</i>	0.24	0.19	0.36	0.03	0.05	1,133	2,115
<i>Giardia intestinalis</i>	2.44	4.89	8.92	0.70	1.28	2,877	5,242
<i>Toxoplasma gondii</i>	2.74	87.56	101.70	12.56	14.59	45,803	53,202
<i>Trichinella</i> spp.	<0.01	0.04	0.07	0.01	0.01	11,096	21,436
<u>Viral</u>							
Astrovirus	0.49	0.33	0.60	0.05	0.09	968	1,756
Hepatitis A virus	0.03	1.10	1.15	0.16	0.17	46,661	48,822
Norovirus	172.77	77.83	110.14	11.16	15.80	646	914
Rotavirus	0.49	0.32	0.54	0.05	0.08	939	1,599
Sapovirus	0.49	0.28	0.51	0.04	0.07	816	1,486
Known		458.57	915.43	65.78	131.31	2,275	4,542
Unknown	1,214.46	922.82	1,377.73	132.37	197.63	1,090	1,627
Total		1,381.39	2,293.15	198.15	328.94	1,318	2,188

¹Incidence per 10,000 residents.

TABLE A49. *West Virginia Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.05	0.09	0.03	0.05	136	233
<i>Brucella</i> spp.	<0.01	0.01	0.01	0.01	0.01	14,536	20,397
<i>Campylobacter</i> spp.	26.73	7.71	42.95	4.16	23.16	1,555	8,666
<i>Clostridium botulinum</i>	<0.01	0.40	0.51	0.21	0.28	1,226,014	1,576,681
<i>Clostridium perfringens</i>	30.56	1.95	2.65	1.05	1.43	345	467
STEC O157:H7	1.26	2.14	2.29	1.16	1.24	9,214	9,849
STEC non-0157	2.24	0.29	0.56	0.15	0.30	688	1,353
ETEC	0.57	0.07	0.14	0.04	0.07	659	1,323
Other diarrheogenic <i>E. coli</i> ,	0.38	0.05	0.09	0.02	0.05	659	1,325
<i>Listeria monocytogenes</i>	0.06	13.67	13.87	7.37	7.48	1,173,495	1,190,372
<i>Salmonella</i> , spp., Nontyphoidal	23.14	16.15	49.22	8.71	26.54	3,763	11,469
<i>S. enterica</i> serotype Typhi	<0.01	<0.01	0.01	<0.01	0.01	3,039	11,330
<i>Shigella</i> , spp	1.37	0.41	2.60	0.22	1.40	1,598	10,211
<i>Staphylococcus aureus</i>	7.63	0.64	0.96	0.35	0.52	456	676
Streptococcus spp. Group A	0.36	0.07	0.14	0.04	0.07	1,023	2,104
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,151	2,177
<i>Vibrio vulnificus</i>	<0.01	1.37	1.37	0.74	0.74	2,601,355	2,603,192
<i>Vibrio parahaemolyticus</i>	1.02	0.31	0.47	0.17	0.25	1,637	2,476
<i>Vibrio</i> spp., other	0.52	0.38	0.46	0.20	0.25	3,944	4,782
<i>Yersinia enterocolitica</i>	3.09	2.03	6.75	1.09	3.64	3,538	11,777
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	0.71	0.22	0.38	0.12	0.20	1,644	2,857
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	730	1,471
<i>Giardia intestinalis</i>	1.16	0.40	0.78	0.21	0.42	1,843	3,626
<i>Toxoplasma gondii</i>	2.74	16.43	19.24	8.86	10.37	32,317	37,830
<i>Trichinella</i> spp.	<0.01	0.01	0.01	<0.01	0.01	7,093	14,858
<u>Viral</u>							
Astrovirus	0.49	0.06	0.11	0.03	0.06	633	1,227
Hepatitis A virus	0.03	0.16	0.17	0.09	0.09	33,106	34,731
Norovirus	172.77	14.38	20.87	7.76	11.25	449	651
Rotavirus	0.49	0.06	0.10	0.03	0.06	634	1,132
Sapovirus	0.49	0.05	0.09	0.03	0.05	533	1,039
Known		79.46	166.89	42.85	90.00	1,531	3,216
Unknown	1,214.46	166.73	257.93	89.91	139.10	740	1,145
Total		246.18	424.83	132.76	229.10	888	1,533

¹Incidence per 10,000 residents.

TABLE A50. *Wisconsin Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.20	0.32	0.03	0.06	174	282
<i>Brucella</i> spp.	0.02	0.24	0.33	0.04	0.06	18,612	25,301
<i>Campylobacter</i> spp.	26.73	30.85	161.69	5.37	28.16	2,010	10,533
<i>Clostridium botulinum</i>	<0.01	1.51	1.93	0.26	0.34	1,497,557	1,918,446
<i>Clostridium perfringens</i>	30.56	7.55	9.96	1.31	1.73	430	568
STEC O157:H7	4.82	31.27	33.23	5.44	5.79	11,306	12,015
STEC non-0157	8.60	4.66	8.34	0.81	1.45	943	1,690
ETEC	0.57	0.29	0.54	0.05	0.09	905	1,651
Other diarrheogenic <i>E. coli</i> ,	0.38	0.20	0.36	0.03	0.06	904	1,653
<i>Listeria monocytogenes</i>	0.05	38.52	38.93	6.71	6.78	1,429,673	1,444,751
<i>Salmonella</i> , spp., Nontyphoidal	32.28	87.99	258.92	15.32	45.09	4,747	13,969
<i>S. enterica</i> serotype Typhi	0.04	0.09	0.32	0.02	0.06	4,111	13,999
<i>Shigella</i> , spp	3.65	4.42	26.03	0.77	4.53	2,113	12,429
<i>Staphylococcus aureus</i>	7.63	2.56	3.65	0.45	0.64	585	833
Streptococcus spp. Group A	0.36	0.29	0.54	0.05	0.09	1,415	2,631
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,577	2,729
<i>Vibrio vulnificus</i>	<0.01	2.01	2.01	0.35	0.35	3,148,286	3,150,385
<i>Vibrio parahaemolyticus</i>	0.40	0.49	0.71	0.09	0.12	2,120	3,064
<i>Vibrio</i> spp., other	0.20	0.57	0.68	0.10	0.12	4,908	5,850
<i>Yersinia enterocolitica</i>	3.09	8.06	25.48	1.40	4.44	4,546	14,365
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	9.24	11.65	18.88	2.03	3.29	2,197	3,560
<i>Cyclospora cayetanensis</i>	0.10	0.06	0.10	0.01	0.02	1,003	1,835
<i>Giardia intestinalis</i>	3.95	5.75	10.30	1.00	1.79	2,534	4,538
<i>Toxoplasma gondii</i>	2.74	63.18	73.08	11.00	12.73	40,123	46,411
<i>Trichinella</i> spp.	<0.01	0.03	0.05	<0.01	0.01	9,876	18,648
<u>Viral</u>							
Astrovirus	0.49	0.24	0.43	0.04	0.07	867	1,535
Hepatitis A virus	0.04	0.90	0.94	0.16	0.16	40,363	42,195
Norovirus	172.77	57.04	79.60	9.93	13.86	575	802
Rotavirus	0.49	0.24	0.40	0.04	0.07	862	1,421
Sapovirus	0.49	0.20	0.36	0.04	0.06	728	1,297
Known		361.08	758.13	62.88	132.02	2,017	4,236
Unknown	1,214.46	670.44	988.08	116.75	172.06	961	1,417
Total		1,031.53	1,746.21	179.62	304.07	1,177	1,992

¹Incidence per 10,000 residents.

TABLE A51. *Wyoming Cost per Case of Foodborne Illness (by pathogen, \$2013)*

Disease or Agent	Illness Incidence ¹	Total Cost (\$million)		Cost per Resident		Cost per Case	
		Basic	Enhanced	Basic	Enhanced	Basic	Enhanced
<u>Bacterial</u>							
<i>Bacillus cereus</i>	2.01	0.02	0.04	0.04	0.06	180	300
<i>Brucella</i> spp.	0.07	0.08	0.11	0.14	0.19	19,525	26,871
<i>Campylobacter</i> spp.	26.73	3.28	17.66	5.64	30.31	2,108	11,338
<i>Clostridium botulinum</i>	<0.01	0.16	0.21	0.28	0.36	1,602,854	2,058,427
<i>Clostridium perfringens</i>	30.56	0.81	1.08	1.39	1.86	456	607
STEC O157:H7	4.02	2.83	3.01	4.85	5.17	12,084	12,868
STEC non-0157	7.17	0.41	0.75	0.70	1.29	975	1,799
ETEC	0.57	0.03	0.06	0.05	0.10	938	1,762
Other diarrheogenic <i>E. coli</i> ,	0.38	0.02	0.04	0.04	0.07	938	1,764
<i>Listeria monocytogenes</i>	0.04	3.63	3.68	6.23	6.31	1,534,861	1,552,770
<i>Salmonella</i> , spp., Nontyphoidal	27.93	8.18	24.44	14.04	41.95	5,026	15,016
<i>S. enterica</i> serotype Typhi	<0.01	<0.01	<0.01	<0.01	<0.01	4,091	14,813
<i>Shigella</i> , spp	1.93	0.25	1.50	0.43	2.58	2,207	13,380
<i>Staphylococcus aureus</i>	7.63	0.27	0.39	0.47	0.68	612	886
Streptococcus spp. Group A	0.36	0.03	0.06	0.05	0.10	1,469	2,811
<i>Vibrio cholerae</i> , toxigenic	<0.01	<0.01	<0.01	<0.01	<0.01	1,621	2,893
<i>Vibrio vulnificus</i>	<0.01	0.06	0.06	0.11	0.11	3,395,447	3,397,752
<i>Vibrio parahaemolyticus</i>	0.12	0.02	0.02	0.03	0.04	2,238	3,279
<i>Vibrio</i> spp., other	0.06	0.02	0.02	0.03	0.04	5,249	6,289
<i>Yersinia enterocolitica</i>	3.09	0.87	2.78	1.49	4.78	4,817	15,467
<u>Parasitic</u>							
<i>Cryptosporidium</i> spp.	3.73	0.50	0.83	0.86	1.42	2,301	3,805
<i>Cyclospora cayetanensis</i>	<0.01	<0.01	<0.01	<0.01	<0.01	1,040	1,959
<i>Giardia intestinalis</i>	2.47	0.38	0.70	0.65	1.20	2,637	4,848
<i>Toxoplasma gondii</i>	2.74	6.82	7.93	11.71	13.60	42,700	49,607
<i>Trichinella</i> spp.	<0.01	<0.01	0.01	0.01	0.01	10,204	19,866
<u>Viral</u>							
Astrovirus	0.49	0.03	0.05	0.04	0.08	895	1,632
Hepatitis A virus	0.02	0.04	0.05	0.08	0.08	43,365	45,385
Norovirus	172.77	6.07	8.59	10.41	14.74	603	853
Rotavirus	0.49	0.03	0.04	0.04	0.07	881	1,497
Sapovirus	0.49	0.02	0.04	0.04	0.07	753	1,380
Known		34.86	74.14	59.84	127.25	2,023	4,301
Unknown	1,214.46	71.45	107.00	122.63	183.64	1,010	1,512
Total		106.32	181.14	182.47	310.89	1,208	2,058

¹Incidence per 10,000 residents.