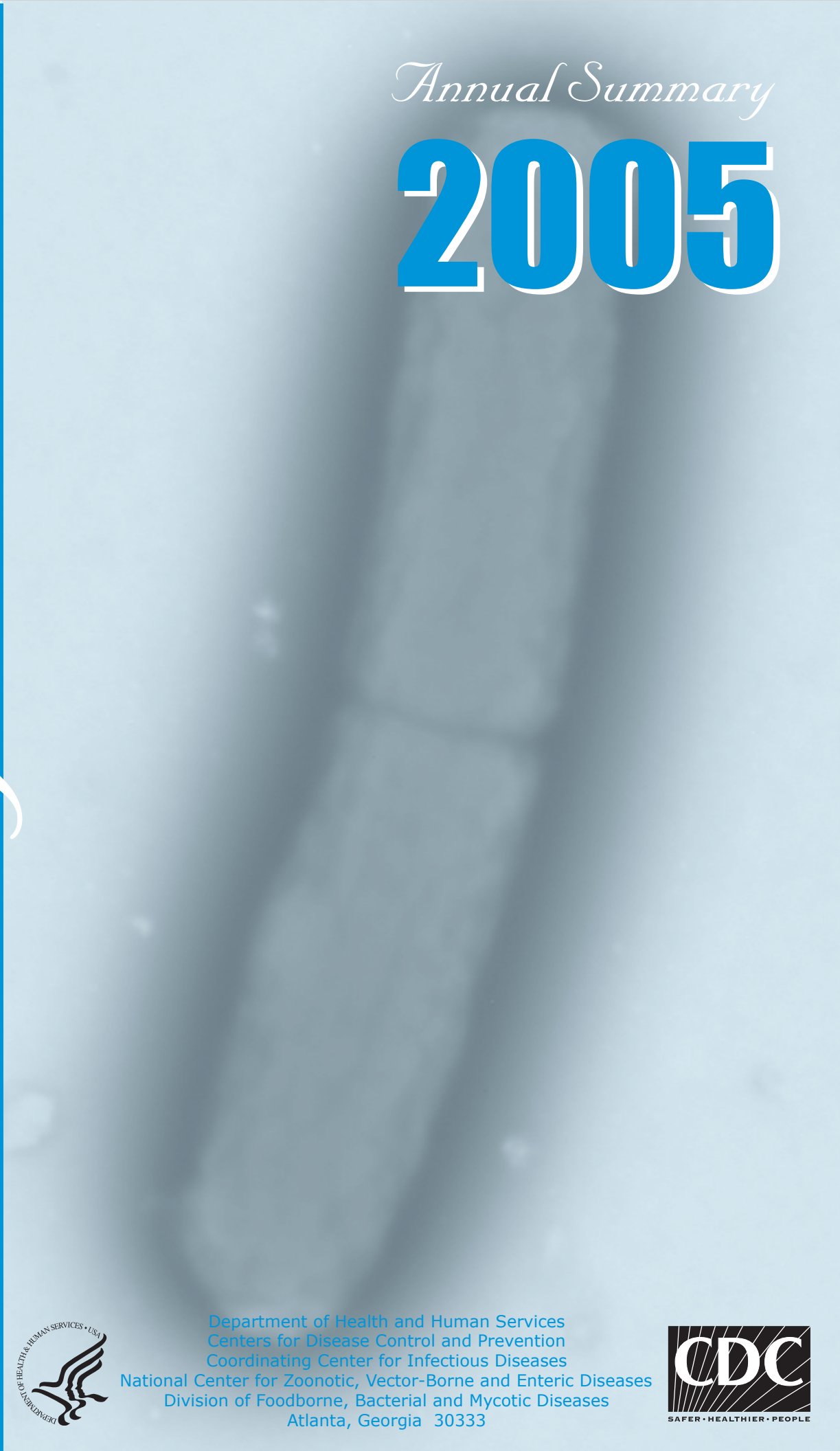
Shigella

Annual Summary

2005



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Coordinating Center for Infectious Diseases
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The Adobe Acrobat (PDF) version of this document can be viewed on the world-wide web at http://www.cdc.gov/ncidod/dbmd/phlisdata/shigella.htm. Further information concerning data described in this report can be obtained by contacting the Foodborne and Diarrheal Diseases Branch at telephone number (404) 639-2206. For further information concerning PHLIS please contact the Biostatistics Office at telephone number (404) 639-1364.

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Laboratory-Confirmed *Shigella* Surveillance Annual Summary, 2005

The Annual Summary contains surveillance data on reported laboratory-confirmed Shigella isolates from humans in the United States. The National Shigella Surveillance System collects reports of isolates of Shigella from every state in the United States. This information is reported electronically through the Public Health Laboratory Information System (PHLIS) by the State Public Health Laboratory Directors and State and Territorial Epidemiologists to the Enteric Diseases Epidemiology Branch (EDEB) and the Biostatistics Office (BSO) of the Division of Foodborne, Bacterial and Mycotic Diseases in the National Center for Zoonotic, Vector-borne and Enteric Diseases.

The National Shigella Surveillance System is based on data collected by state and territorial public health laboratories. Shigella isolates are submitted to the state public health laboratory by clinical diagnostic laboratories. The state and territorial laboratories confirm the isolates as Shigella, perform subtyping, and submit the data for reporting through PHLIS. Unusual or untypable isolates are forwarded to the National Shigella Reference Laboratory at the Centers for Disease Control and Prevention for further characterization or confirmation. These results are reported back to the state laboratory, where they are reported to CDC through PHLIS.

The capture of isolates in the National Shigella Surveillance System is considered to be consistent. However, some Shigella isolates may not be forwarded or reported to state public health laboratories and therefore are not captured. In addition, irrespective of the surveillance system, many cases of Shigella illness are not reported because the ill person does not seek medical care, the health-care provider does not obtain a specimen for diagnosis or the laboratory does not perform culture for Shigella. The results of surveillance reported herein are therefore substantial underestimates of the true number of infections.

The number of isolates reported by state represents the state where laboratory confirmation and subtyping were performed. In some instances, the reporting state is not the same as the state of residence of the person from whom the isolate was obtained. For the Annual Summaries, duplicate records were deleted. All isolates reported herein were from infected humans.

There are 4 major subgroups of Shigella, designated A, B, C and D, and 44 recognized serotypes (Table A). Subgroups A, B, C and D have historically been treated as species: subgroup A for Shigella dysenteriae; subgroup B for Shigella flexneri; subgroup C for Shigella boydii and subgroup D for Shigella sonnei. These subgroups and serotypes are differentiated from one another by their biochemical traits (ability to ferment D-mannitol) and antigenic properties. The most recently recognized serotype belongs to subgroup C (S. boydii) (1).

Table A. Classification of *Shigella* Subgroups

Subgroup	Species	Number of serotypes	Fermentation of D-mannitol	Subgroup B group antigens
A	*S. dysenteriae*	15	-	-
B	*S. flexneri*	8[a]	+	+
C	*S. boydii*	20	+	-
D	*S. sonnei*	1	+	-

[a] = Serotypes 1-5 are subdivided into 11 subserotypes.

The Statistical Outbreak Detection Algorithm (SODA), developed by BSO and EDEB, is a statistical algorithm performed on the National Surveillance Data to detect unusual clusters of Shigella infection. SODA compares current Shigella isolates reported through PHLIS by subgroup or serotype with a 5 year historical baseline for that subgroup or serotype for the specified time period to detect unusual increases from the baseline. Analyses can be conducted at state, regional, or national levels. Since 1996, SODA has been implemented at CDC and selected state health departments. If you would like more information on SODA, please call the PHLIS Helpdesk (404) 639-3365.

Annual Highlights for 2005

A total of 10,484 Shigella isolates were reported from public health laboratories in 50 states in 2005 (Table 1). This represents a stabilization of Shigella rates from the sharp decreases that occurred in 2004. The national rate of reported Shigella isolates in 2005 was 3.5 per 100,000 population based on 2005 census population estimates for the United States.

Similar to previous years, Shigella was isolated frequently from children under 5 years of age, who accounted for 30.0% of all isolates. About 34.3% of all isolates came from persons aged 5-19 years, and 26.6% from persons aged 20-59, with smaller percentages in older age groups. The median age of patients by species is shown in Table 4. The overall distribution of Shigella isolates between the sexes was similar, with females accounting for 49.3% of isolates. Females accounted for more cases than males in all age groups except 40-49 (46.6% female). In one age group, age 20-29 years, the female predominance was particularly evident at 63.9% of isolates. These gender differences were more striking in Shigella sonnei, where females accounted for 70.7% of infections among persons age 20-29 years, 60.4% of infections among persons age 30-39 years, 54.5% of infections among persons age 40-49 years, and 56.3% of infections among persons age 50-59 years. Among isolates of Shigella flexneri, a male predominance was seen, particularly in the age groups 20-29 (52.0%), 30-39 (67.4%) , 40-49 (72.2%), and 50-59 years (56.4%). Gender information was not reported for 7.1% of all isolates and age information was not reported for 5.6% of isolates.

The frequency of species, and the frequency of serotypes within these groups for all Shigella isolates are shown in Tables 1 and 2. Of the 10,484 isolates, 7,820 (89.7%) were subgrouped. Trends of subgroups remained similar to recent years, with subgroup D (S. sonnei) accounting for the largest percentage of isolates (74.4%), followed by subgroup B (S. flexneri, 13.6%), subgroup C (S. boydii, 1.2%), and subgroup A (S. dysenteriae, 0.5%). Shigella isolate serotype trends by year are shown in Table 5 and in Figure 2. Over the past decade, the numbers of Shigella isolates in subgroups A, B, and C, and the proportions of all Shigella isolates due to these three subgroups have declined. The number (1082) and the proportion (10.3%) of Shigella isolates that were not identified as belonging to a specific subgroup also decreased. The highest numbers and proportions of all reported Shigella isolates that were not identified as belonging to a specific subgroup were reported by Texas (382, 35.3%), California (297, 27.4%), and Illinois (222, 20.5%) .

Shigella transmission occurs via the fecal-oral route. Most subgroup D (S. sonnei) infections in the United States occur in young children and in association with crowding and poor personal hygiene. Daycare centers have been implicated in many large S. sonnei outbreaks, these can last many months and affect many persons (2,3,4). In 2005, a strain of S. sonnei resistant to ampicillin and trimethoprim-sulfamethoxazole emerged as a cause of prolonged, community-wide outbreaks of shigellosis associated with child care centers in three States (2). Antimicrobial treatment options for children infected with this strain are few, and include oral azithromycin, “off-label”

use of fluoroquinolones, or intramuscular agents such as ceftriaxone (2, 14). S. sonnei has also been transmitted through unchlorinated wading pools (6), interactive water fountains (7), food items such as parsley (8) and bean dip (9), and men who have sex with men (MSM) (10). Until recently, the dominant subgroup causing illness among MSM was subgroup B (S. flexneri) (11, 12). However, in large outbreaks among MSM in San Francisco, the dominant serotype was subgroup D (S. sonnei) (10). Recent trends in shigellosis in the United States are reviewed in a publication by Dr. Amita Gupta and co-authors (1,3).

Geographic trends by region for subgroup D (S. sonnei) isolates from 1991 to 2005 are illustrated in Figure 3. Several regions showed increases in subgroup D (S. sonnei) isolates from 2004 to 2005: the Mountain region, East south Central, New England, West North Central, West South Central and Pacific. These increases likely represent the large daycare related outbreaks that occurred in 2005 (2).

Acknowledgements

Thanks to Richard Bishop and Sandra Bulens for assembling this summary and to all the State Public Health laboratories and epidemiologists who participate in this surveillance

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TABLE 1

Laboratory confirmed Shigella isolates reported to the CDC by Species in 2005

Rank	Species	Reported	Percent
1	*S. sonnei*	7795	74.4
2	*S. flexneri*	1430	13.6
3	*S. boydii*	124	1.2
4	*S. dysenteriae*	53	0.5
	Sub Total	**9402**	**89.7**
	Unknown	1082	10.3
	Sub Total	**1082**	**10.3**
	Total	**10484**	**100**

TABLE 2

Laboratory confirmed Shigella isolates reported to the CDC by Serotype in 2005

Rank	Serotype	Reported	Percent
1	*S. sonnei*	7795	74.4
2	*S. flexneri* unspecified	838	8.0
3	*S. flexneri* 2 unspecified	108	1.0
4	*S. boydii* unspecified	91	0.9
5	*S. flexneri* 2a	88	0.8
6	*S. flexneri* 1 unspecified	86	0.8
7	*S. flexneri* 3 unspecified	51	0.5
8	*S. flexneri* 4 unspecified	50	0.5
9	*S. flexneri* 4a	47	0.5
10	*S. dysenteriae* unspecified	34	0.3
11	*S. flexneri* 1b	34	0.3
12	*S. flexneri* 3a	31	0.3
13	*S. flexneri* 6	28	0.3
14	*S. flexneri* variant y	26	0.3
15	*S. flexneri* 2b	17	0.2
16	*S. flexneri* 3b	17	0.2
17	*S. boydii* 2	11	0.1
18	*S. boydii* 1	8	0.1
19	*S. dysenteriae* 2	5	0.1
20	*S. boydii* 4	4	0.0
21	*S. dysenteriae* 3	4	0.0
22	*S. dysenteriae* 4	4	0.0
23	*S. boydii* 14	3	0.0
24	*S. dysenteriae* 1	3	0.0
25	*S. flexneri* 1a	3	0.0
26	*S. boydii* 10	2	0.0
27	*S. boydii* 15	2	0.0
28	*S. boydii* 20	2	0.0
29	*S. flexneri* 5 unspecified	2	0.0
30	*S. boydii* 8	1	0.0
31	*S. dysenteriae* 12	1	0.0
32	*S. dysenteriae* 3162-96	1	0.0
33	*S. dysenteriae* 6	1	0.0
34	*S. flexneri* 4b	1	0.0
35	*S. flexneri* 5a	1	0.0
36	*S. flexneri* 88-893	1	0.0
37	*S. flexneri* variant x	1	0.0
	Sub Total	**9402**	**89.7**
	Unknown	1082	10.3
	Sub Total	**1082**	**10.3**
	Total	**10484**	**100.0**

TABLE 3

Laboratory confirmed Shigella isolates reported to the CDC by Species, Age Group and Sex, 2005

		Sex			
Species	**Age Group**	**Female**	**Male**	**Unknown**	**Total**
All *Shigella*	< 1 Year	89	80	15	184
	1 to 4 Years	1436	1380	142	2958
	5 to 9 Years	1303	1197	100	2600
	10 to 19 Years	499	461	34	994
	20 to 29 Years	619	295	55	969
	30 to 39 Years	435	381	29	845
	40 to 49 Years	262	289	11	562
	50 to 59 Years	214	179	22	415
	60 to 69 Years	110	102	7	219
	70 to 79 Years	58	51	1	110
	80+ Years	25	17	4	46
	Unknown Age	121	137	324	582
	Total	**5171**	**4569**	**744**	**10484**
S. boydii	< 1 Year	2	2	2	6
	1 to 4 Years	9	12		21
	5 to 9 Years	10	3	2	15
	10 to 19 Years	5	5	2	12
	20 to 29 Years	7			7
	30 to 39 Years	9	11	2	22
	40 to 49 Years	5	3	1	9
	50 to 59 Years	1	7		8
	60 to 69 Years	5	4	1	10
	70 to 79 Years	3	1		4
	80+ Years	1			1
	Unknown Age	2	5	2	9
	Total	**59**	**53**	**12**	**124**
S. dysenteriae	1 to 4 Years	4	5	1	10
	5 to 9 Years	3	3		6
	10 to 19 Years	4	3		7
	20 to 29 Years	5	4		9
	30 to 39 Years	6	1		7
	40 to 49 Years	4	1		5
	50 to 59 Years	3			3
	60 to 69 Years	1			1
	70 to 79 Years		1		1
	80+ Years	1			1
	Unknown Age	1	1	1	3
	Total	**32**	**19**	**2**	**53**
S. flexneri	< 1 Year	16	5	1	22
	1 to 4 Years	138	175	15	328
	5 to 9 Years	98	94	5	197
	10 to 19 Years	50	58	3	111
	20 to 29 Years	67	90	16	173
	30 to 39 Years	56	122	3	181
	40 to 49 Years	39	109	3	151
	50 to 59 Years	36	57	8	101

TABLE 3

Laboratory confirmed Shigella isolates reported to the CDC by Species, Age Group and Sex, 2005

		Sex			
Species	**Age Group**	**Female**	**Male**	**Unknown**	**Total**
	60 to 69 Years	20	25	3	48
	70 to 79 Years	8	10		18
	80+ Years	3	4	2	9
	Unknown Age	17	20	54	91
	Total	**548**	**769**	**113**	**1430**
S. sonnei	< 1 Year	64	66	12	142
	1 to 4 Years	1150	1061	120	2331
	5 to 9 Years	1062	971	79	2112
	10 to 19 Years	378	323	27	728
	20 to 29 Years	470	160	35	665
	30 to 39 Years	329	194	22	545
	40 to 49 Years	192	153	7	352
	50 to 59 Years	148	101	14	263
	60 to 69 Years	73	57	3	133
	70 to 79 Years	38	31	1	70
	80+ Years	19	12	2	33
	Unknown Age	79	84	258	421
	Total	**4002**	**3213**	**580**	**7795**
Unknown	< 1 Year	7	7		14
	1 to 4 Years	135	127	6	268
	5 to 9 Years	130	126	14	270
	10 to 19 Years	62	72	2	136
	20 to 29 Years	70	41	4	115
	30 to 39 Years	35	53	2	90
	40 to 49 Years	22	23		45
	50 to 59 Years	26	14		40
	60 to 69 Years	11	16		27
	70 to 79 Years	9	8		17
	80+ Years	1	1		2
	Unknown Age	22	27	9	58
	Total	**530**	**515**	**37**	**1082**

TABLE 4

Median Age of persons from whom laboratory confirmed Shigella isolates reported to the CDC by Species and Year for 1991-2005

	Year														
Species	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
S. boydii	21	21	21	22	14	9	19	21	8	25	25	21	17	21	25
S. dysenteriae	19	26	29	25	30	25	18	35	28	10	28	29	22	9	25
S. flexneri	19	20	18	20	18	22	16	17	10	10	15	21	23	20	20
S. sonnei	8	7	7	7	7	7	7	7	7	8	8	7	7	7	7
Unknown	8	10	7	7	6	7	25	6	7	13	23	6	6	7	8

NOTE:

** Median Calculation excludes California isolates. Age information unavailable for California prior to 2000

FIGURE 1

Median Age of persons from whom laboratory confirmed *Shigella* isolates reported to CDC by Species and Year for 1991-2005

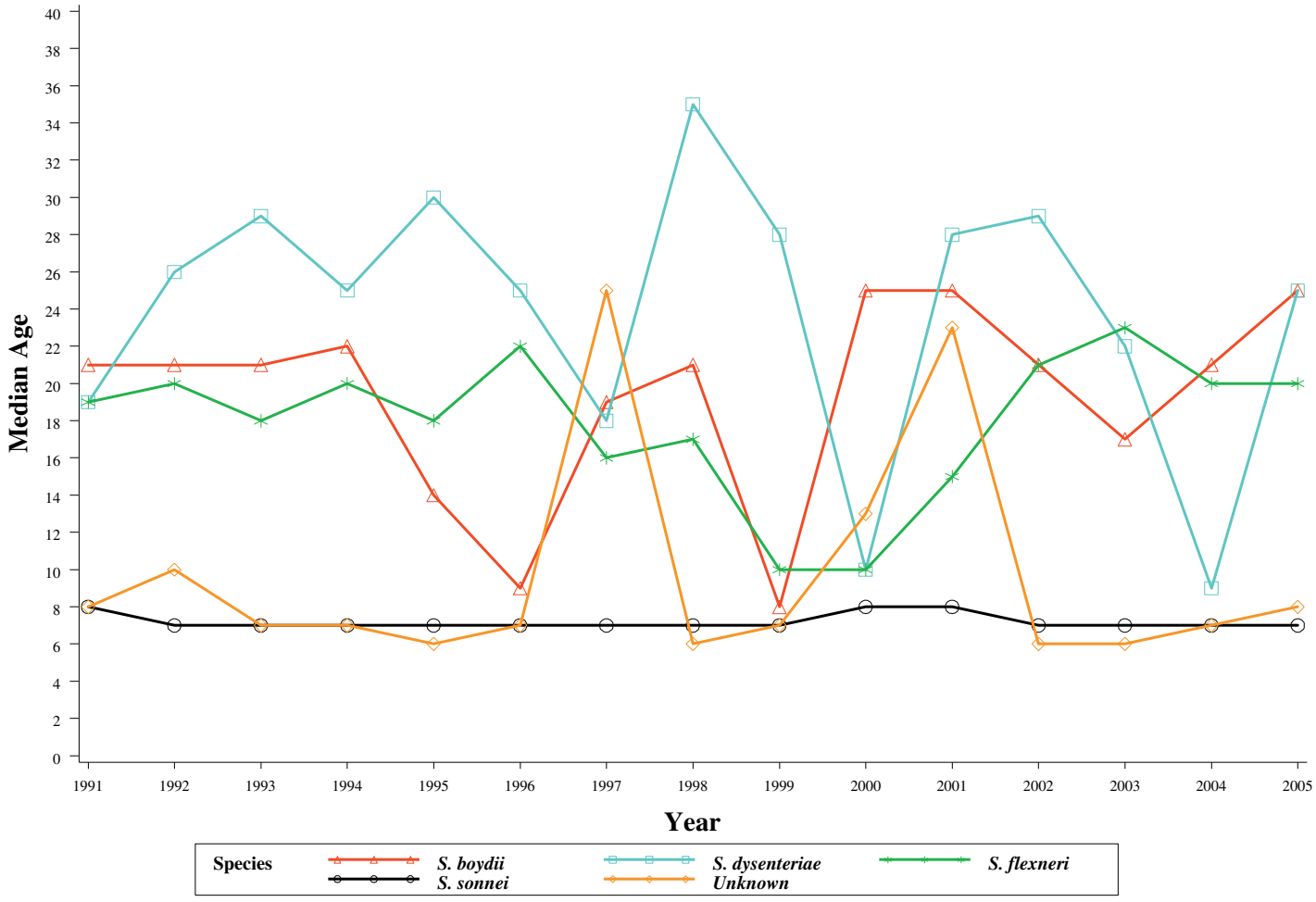

TABLE 5

Laboratory confirmed Shigella isolates reported to the CDC by Species and Year for 1991-2005

	Year															
Species	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
S. boydii	312	224	221	207	229	275	253	208	158	180	126	104	148	169	124	2938
S. dysenteriae	145	126	105	94	90	103	79	87	49	57	48	43	43	37	53	1159
S. flexneri	3712	3250	3061	3101	3019	2704	2573	2207	2025	1821	1668	1549	1745	1603	1430	35468
S. sonnei	10734	10106	14339	12446	14811	10262	8807	9387	7366	10803	8193	11201	10621	6433	7795	153304
Unknown	1602	1217	1785	2935	1181	727	602	596	489	639	564	2171	3394	1101	1082	20085
Total	**16505**	**14923**	**19511**	**18783**	**19330**	**14071**	**12314**	**12485**	**10087**	**13500**	**10599**	**15068**	**15951**	**9343**	**10484**	**212954**

FIGURE 2

Laboratory confirmed *Shigella* isolates reported to CDC by Species and Year for 1991-2005

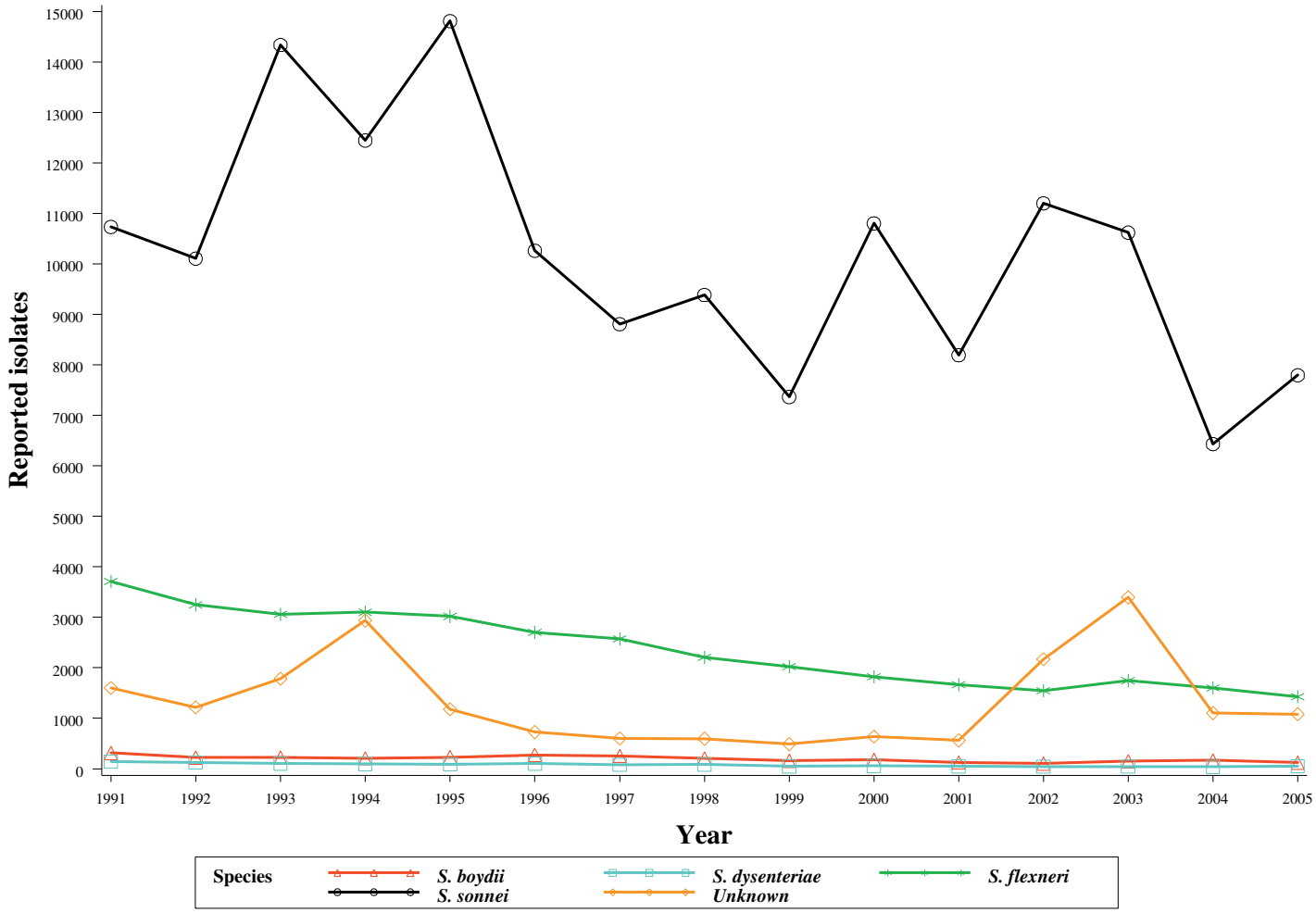

TABLE 6

Laboratory confirmed Shigella isolates reported to the CDC by Species, Serotype and Year for 1991-2005

		Year															
Species	**Serotype**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
S. boydii	*boydii* 1	13	7	14	9	15	22	12	12	13	13	11	7	10	10	8	176
	boydii 2	55	19	54	49	60	82	54	43	28	38	26	22	29	20	11	590
	boydii 3					2		2	2	2	2	3					13
	boydii 4	21	10	12	16	21	14	20	12	16	15	4	10	9	15	4	199
	boydii 5	2	2	2	1	1	1	3		2	7	2		1	3		27
	boydii 6						1		2	5	4	1	2				15
	boydii 7	1			1												2
	boydii 8		1			1		4	1		2	2		2	2	1	16
	boydii 9	1				1		1				1					4
	boydii 10	11	5	2	3	7	10	9	5	5		1	2	2	3	2	67
	boydii 11		2	2			2		1	2	2						11
	boydii 12	1		1			2	2	2	3	2	6	2	1	1		23
	boydii 13	1					1			2							4
	boydii 14	9	6	10	7	12	13	11	5	8	5	3	1	1	3	3	97
	boydii 15							1			2	4		1		2	10
	boydii 17					1											1
	boydii 18	1			1			2	2	1			1				8
	boydii 19							2	4	1							7
	boydii 20													1	1	2	4
	boydii unspecified	196	172	124	120	108	127	130	117	70	88	62	57	91	111	91	1664
	Sub Total	**312**	**224**	**221**	**207**	**229**	**275**	**253**	**208**	**158**	**180**	**126**	**104**	**148**	**169**	**124**	**2938**
S. dysenteriae	*dysenteriae* 1	3	2	9	7	7	4	6	3	6	9	1	1	5	4	3	70
	dysenteriae 2	20	21	11	8	10	16	17	37	12	5	8	5	10	4	5	189
	dysenteriae 3	10	8	6	10	17	17	10	9	4	3	4	1	2	4	4	109
	dysenteriae 4	3	3	1			3		1		3		5	2	1	4	26
	dysenteriae 5						1						1				2
	dysenteriae 6	1			1			1								1	4
	dysenteriae 7									1							1
	dysenteriae 8	1								1			2				4
	dysenteriae 9	3	3		2	1	5	5		1	1	3	3	1			28
	dysenteriae 10										1		2				3
	dysenteriae 11						2	2									4
	dysenteriae 12			1		1									2	1	5
	dysenteriae 13	2															2
	dysenteriae 14													1			1
	dysenteriae unspecified	102	89	77	66	54	55	38	37	24	35	32	23	22	22	34	710
	dysenteriae 3162-96															1	1
	Sub Total	**145**	**126**	**105**	**94**	**90**	**103**	**79**	**87**	**49**	**57**	**48**	**43**	**43**	**37**	**53**	**1159**
S. flexneri	*flexneri* 1 unspecified	391	294	294	310	412	303	238	200	169	145	136	110	100	98	86	3286
	flexneri 1a	16	5	2	8	4	4	6	9	7	5	11	9	6	1	3	96
	flexneri 1b	63	26	12	54	17	7	18	26	25	13	19	26	33	27	34	400
	flexneri 2 unspecified	362	393	394	367	382	401	423	395	361	293	226	183	186	185	108	4659
	flexneri 2a	98	85	88	84	71	31	85	102	134	100	147	103	95	89	88	1400
	flexneri 2b	26	10	17	10	17	7	11	20	13	33	17	14	17	10	17	239
	flexneri 3 unspecified	154	158	165	131	246	255	248	155	93	96	95	70	113	112	51	2142
	flexneri 3a	31	22	11	13	11	26	26	28	65	55	34	51	79	53	31	536
	flexneri 3b	14	5	4	1	7	18	11	12	9	12	12	16	12	13	17	163

TABLE 6

Laboratory confirmed Shigella isolates reported to the CDC by Species, Serotype and Year for 1991-2005

		Year															
Species	**Serotype**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
	flexneri 4 unspecified	120	126	91	116	139	124	108	116	75	72	67	74	61	69	50	1408
	flexneri 4a	8	11	19	7	12	17	13	13	34	35	55	53	49	53	47	426
	flexneri 4b	1	2	2	1		1		4				5	6		1	23
	flexneri 4c													1			1
	flexneri 5 unspecified	16	14	28	43	62	39	47	56	28	23	17	9	10	3	2	397
	flexneri 5a													1	2	1	4
	flexneri 6	92	72	67	141	107	119	118	78	79	68	71	59	58	42	28	1199
	flexneri unspecified	2320	2027	1867	1815	1528	1350	1214	985	916	853	738	755	892	814	838	18912
	flexneri variant x							3	6	2	2	2	4	6	5	1	31
	flexneri variant y					4	2	4	2	15	16	21	8	15	26	26	139
	flexneri 88-893 (Provisional)													5	1	1	7
	Sub Total	**3712**	**3250**	**3061**	**3101**	**3019**	**2704**	**2573**	**2207**	**2025**	**1821**	**1668**	**1549**	**1745**	**1603**	**1430**	**35468**
S. sonnei	*sonnei*	10734	10106	14339	12446	14811	10262	8807	9387	7366	10803	8193	11201	10621	6433	7795	153304
	Sub Total	**10734**	**10106**	**14339**	**12446**	**14811**	**10262**	**8807**	**9387**	**7366**	**10803**	**8193**	**11201**	**10621**	**6433**	**7795**	**153304**
Unknown	Unknown	1602	1217	1785	2935	1181	727	602	596	489	639	564	2171	3394	1101	1082	20085
	Sub Total	**1602**	**1217**	**1785**	**2935**	**1181**	**727**	**602**	**596**	**489**	**639**	**564**	**2171**	**3394**	**1101**	**1082**	**20085**
	Total	**16505**	**14923**	**19511**	**18783**	**19330**	**14071**	**12314**	**12485**	**10087**	**13500**	**10599**	**15068**	**15951**	**9343**	**10484**	**212954**

TABLE 7

Laboratory confirmed Shigella isolates reported to the CDC by Species, Serotype and Month for 2005

		Month												
Species	**Serotype**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**
S. boydii	*boydii* 1	1			2	1	1	1	2					8
	boydii 2		2		2	1			2	1	1	1	1	11
	boydii 4		1			1	1		1					4
	boydii 8			1										1
	boydii 10			1					1					2
	boydii 14							2	1					3
	boydii 15										1		1	2
	boydii 20					1							1	2
	boydii unspecified	10	4	6	9	10	3	3	14	7	8	10	7	91
	Sub Total	**11**	**7**	**8**	**13**	**14**	**5**	**6**	**21**	**8**	**10**	**11**	**10**	**124**
S. dysenteriae	*dysenteriae* 1								1	1			1	3
	dysenteriae 2	1			1				2			1		5
	dysenteriae 3		1				1			2				4
	dysenteriae 4	1	2				1							4
	dysenteriae 6								1					1
	dysenteriae 12										1			1
	dysenteriae unspecified	2	1	2	3	3	1	1	9	3	4	1	4	34
	dysenteriae 3162-96											1		1
	Sub Total	**4**	**4**	**2**	**4**	**3**	**3**	**1**	**13**	**6**	**5**	**3**	**5**	**53**
S. flexneri	*flexneri* 1 unspecified	7	8	6	4	11	5	3	12	12	7	9	2	86
	flexneri 1a						1	2						3
	flexneri 1b	2	4	1	3		5	7	3	4	1	4		34
	flexneri 2 unspecified	13	5	11	12	8	11	8	13	10	10	5	2	108
	flexneri 2a	3	9	7	6	5	11	4	9	6	11	8	9	88
	flexneri 2b	1			1	2		4	1	2	5		1	17
	flexneri 3 unspecified	3	3	4	10	6	2	1	5	4	3	3	7	51
	flexneri 3a	1	1	2	3	1	2		8	3	5	1	4	31
	flexneri 3b	2	2	1	2	2	1			1	1	1	4	17
	flexneri 4 unspecified	4	2	3	5	1	4	4	8	5	7	2	5	50
	flexneri 4a	2	5	4	4	4	7	8	5	4	1	3		47
	flexneri 4b									1				1
	flexneri 5 unspecified				1							1		2
	flexneri 5a								1					1
	flexneri 6	2	1		3	4	4	3	4	3	3		1	28
	flexneri unspecified	76	48	71	63	74	65	66	79	85	80	59	72	838
	flexneri variant x											1		1
	flexneri variant y	1	2	1	1		2	1	5	5	1	6	1	26
	flexneri 88-893 (Provisional)								1					1
	Sub Total	**117**	**90**	**111**	**118**	**118**	**120**	**111**	**154**	**145**	**135**	**103**	**108**	**1430**
S. sonnei	*sonnei*	465	459	523	616	710	776	690	804	802	787	681	482	7795
	Sub Total	**465**	**459**	**523**	**616**	**710**	**776**	**690**	**804**	**802**	**787**	**681**	**482**	**7795**
Unknown	Unknown	65	42	35	58	55	72	87	147	173	123	109	116	1082
	Sub Total	**65**	**42**	**35**	**58**	**55**	**72**	**87**	**147**	**173**	**123**	**109**	**116**	**1082**
	Total	**662**	**602**	**679**	**809**	**900**	**976**	**895**	**1139**	**1134**	**1060**	**907**	**721**	**10484**

TABLE 8

Laboratory confirmed Shigella isolates reported to the CDC by Species, Serotype and Month for 1991-2005

		Month												
Species	**Serotype**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**
S. boydii	*boydii* 1	9	4	12	10	15	12	19	23	31	19	8	14	176
	boydii 2	30	32	37	44	48	55	62	86	75	64	39	18	590
	boydii 3	1	2		2	2	4			2				13
	boydii 4	16	10	9	11	9	10	28	33	30	15	17	11	199
	boydii 5	1	2		3	3	5	2		2	4	5		27
	boydii 6	1	1				2	3	2	2	4			15
	boydii 7		1						1					2
	boydii 8		2	2	1	1	1	1	5	1			2	16
	boydii 9	1		1							2			4
	boydii 10	1	3	3	4	4	4	9	15	8	7	5	4	67
	boydii 11	1		2	1			3	1	1		1	1	11
	boydii 12	2	2	3		1	3	2	6	2	2			23
	boydii 13	1									1	1	1	4
	boydii 14	2	1	3	7	11	5	20	15	7	15	7	4	97
	boydii 15				1	4		1	1	1	1		1	10
	boydii 17						1							1
	boydii 18		1			3			2		1		1	8
	boydii 19	2		1		1			1	1	1			7
	boydii 20	1				1			1				1	4
	boydii unspecified	96	103	83	66	129	133	171	204	200	212	151	116	1664
	Sub Total	**165**	**164**	**156**	**150**	**232**	**235**	**321**	**396**	**363**	**348**	**234**	**174**	**2938**
S. dysenteriae	*dysenteriae* 1	7	5	2	4	4	4	7	12	7	10	1	7	70
	dysenteriae 2	8	21	22	16	6	15	25	30	16	16	9	5	189
	dysenteriae 3	4	4	10	7	11	7	13	18	14	6	9	6	109
	dysenteriae 4	2	3	3		1	3	2	6	2	1	1	2	26
	dysenteriae 5									2				2
	dysenteriae 6							2	1			1		4
	dysenteriae 7					1								1
	dysenteriae 8							1	1	1		1		4
	dysenteriae 9		4	2	3	6	1	2	2	3	2	2	1	28
	dysenteriae 10							1		2				3
	dysenteriae 11					1	1	1			1			4
	dysenteriae 12	1						1	1		1	1		5
	dysenteriae 13							1		1				2
	dysenteriae 14										1			1
	dysenteriae unspecified	47	40	63	50	46	43	49	100	93	74	60	45	710
	dysenteriae 3162-96											1		1
	Sub Total	**69**	**77**	**102**	**80**	**76**	**74**	**105**	**171**	**141**	**112**	**86**	**66**	**1159**
S. flexneri	*flexneri* 1 unspecified	241	204	227	226	268	279	331	372	340	377	211	210	3286
	flexneri 1a	10	6	9	6	11	5	12	9	6	10	7	5	96
	flexneri 1b	46	29	25	28	19	70	35	52	39	23	24	10	400
	flexneri 2 unspecified	410	308	309	351	413	371	461	605	391	413	319	308	4659
	flexneri 2a	120	105	100	117	98	134	136	159	120	124	96	91	1400
	flexneri 2b	19	13	27	20	12	15	37	32	18	22	12	12	239
	flexneri 3 unspecified	185	155	144	179	164	130	254	207	222	179	168	155	2142
	flexneri 3a	37	42	39	35	32	42	63	73	50	54	34	35	536

TABLE 8

Laboratory confirmed Shigella isolates reported to the CDC by Species, Serotype and Month for 1991-2005

		Month												
Species	**Serotype**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**
	flexneri 3b	16	13	25	16	13	13	11	7	8	13	14	14	163
	flexneri 4 unspecified	116	79	111	111	100	118	146	163	147	120	102	95	1408
	flexneri 4a	35	36	30	41	35	47	47	33	35	38	29	20	426
	flexneri 4b	1			1	3	2	2	3	4	1	4	2	23
	flexneri 4c											1		1
	flexneri 5 unspecified	32	20	27	20	28	43	49	41	47	33	34	23	397
	flexneri 5a		1			1	1		1					4
	flexneri 6	67	59	57	85	78	85	178	178	153	112	76	71	1199
	flexneri unspecified	1372	1333	1428	1366	1472	1336	1690	1874	2035	1823	1638	1545	18912
	flexneri variant x		2	1	2	3	2	4	5	4	1	5	2	31
	flexneri variant y	13	9	14	12	6	13	5	14	15	8	19	11	139
	flexneri 88-893 (Provisional)	1	1			1	1	2	1					7
	Sub Total	**2721**	**2415**	**2573**	**2616**	**2757**	**2707**	**3463**	**3829**	**3634**	**3351**	**2793**	**2609**	**35468**
S. sonnei	*sonnei*	9326	7917	8869	8744	11667	13066	15124	18056	16680	17114	14472	12269	153304
	Sub Total	**9326**	**7917**	**8869**	**8744**	**11667**	**13066**	**15124**	**18056**	**16680**	**17114**	**14472**	**12269**	**153304**
Unknown	Unknown	1078	1078	1220	1385	1767	1696	1804	2080	2292	2082	1848	1755	20085
	Sub Total	**1078**	**1078**	**1220**	**1385**	**1767**	**1696**	**1804**	**2080**	**2292**	**2082**	**1848**	**1755**	**20085**
	Total	**13359**	**11651**	**12920**	**12975**	**16499**	**17778**	**20817**	**24532**	**23110**	**23007**	**19433**	**16873**	**212954**

TABLE 9

Laboratory confirmed Shigella isolates reported to the CDC by Species, Geographic Region and Year for 1991-2005

		Year															
Species	**Region**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
All *Shigella*	New England	1757	555	520	414	586	373	486	366	851	385	288	325	338	273	280	7797
	Mid Atlantic	1263	1071	1215	1562	1758	2240	1874	1739	750	1726	967	1214	1678	896	745	20698
	East North Central	1643	2154	2816	1970	2105	1190	1457	1580	1853	2096	1897	1461	1462	813	743	25240
	West North Central	403	589	828	1368	1391	699	494	623	806	2064	1332	633	467	410	1290	13397
	South Atlantic	1565	1727	2860	4790	2181	1912	1136	1275	534	1171	1331	3624	2145	1160	840	28251
	East South Central	1108	866	1817	1732	1242	576	576	1230	699	587	647	652	720	834	1049	14335
	West South Central	1216	892	1894	1062	1504	983	1388	1469	1212	1169	795	3092	5503	2885	2919	27983
	Mountain	2248	1174	1348	1436	2713	1665	1238	764	776	874	776	935	1042	635	969	18593
	Pacific	5302	5895	6213	4449	5850	4433	3665	3439	2606	3428	2566	3132	2596	1437	1649	56660
	Total	**16505**	**14923**	**19511**	**18783**	**19330**	**14071**	**12314**	**12485**	**10087**	**13500**	**10599**	**15068**	**15951**	**9343**	**10484**	**212954**
S. boydii	New England	12	4		5	11	6	14	6	8	7	5	6	10	10	12	116
	Mid Atlantic	10	6	11	15	12	5	13	10	12	16	15	11	11	9	5	161
	East North Central	20	16	30	19	31	19	23	25	23	12	12	11	15	12	13	281
	West North Central	7	3		7	6	3	4	4	6	7	7	6	2	11	6	79
	South Atlantic	8	5	10	27	7	10	7	9	9	14	12	7	4	21	6	156
	East South Central		1	4	1		2	1	2		1	2		1	1	2	18
	West South Central	44	11	29	23	27	19	26	15	18	12	5	5	24	23	18	299
	Mountain	30	14	14	18	32	91	41	22	23	38	28	18	22	17	21	429
	Pacific	181	164	123	92	103	120	124	115	59	73	40	40	59	65	41	1399
	Total	**312**	**224**	**221**	**207**	**229**	**275**	**253**	**208**	**158**	**180**	**126**	**104**	**148**	**169**	**124**	**2938**
S. dysenteriae	New England	6	6			3	6	6	10	3	2	3	4	4	2	5	60
	Mid Atlantic	6	8	2	6	6	6	8	7	2	11	7	6	8	3	3	89
	East North Central	11	21	4	6	11	8	2	9	9	4		7	7	4	11	114
	West North Central	1	6	1	2	1	2	2	1	2		3	2	1	1	1	26
	South Atlantic	6	4	4	5	2	8	5	6	2	4	8		1	1	3	59
	East South Central		1	4	3			3	1					1	4	1	18
	West South Central	10	2	6	8	5	7	5	9	1	3	1		2	7	6	72
	Mountain	12	5	12	9	6	18	12	16	7	5	3	5	5	3	9	127
	Pacific	93	73	72	55	56	48	36	28	23	28	23	19	14	12	14	594
	Total	**145**	**126**	**105**	**94**	**90**	**103**	**79**	**87**	**49**	**57**	**48**	**43**	**43**	**37**	**53**	**1159**
S. flexneri	New England	94	107	92	106	115	94	123	102	99	74	88	79	95	84	78	1430
	Mid Atlantic	227	177	211	213	206	179	188	247	176	154	194	106	104	154	100	2636
	East North Central	339	330	287	238	289	267	185	191	223	179	145	153	192	194	128	3340
	West North Central	115	77	67	121	71	105	82	79	95	70	70	77	59	50	71	1209
	South Atlantic	124	137	173	343	196	122	120	136	127	135	164	160	158	177	184	2456
	East South Central	20	16	18	31	28	21	40	18	16	21	26	32	34	41	35	397
	West South Central	268	156	122	128	167	99	164	137	174	121	71	76	128	157	116	2084
	Mountain	491	371	382	353	464	441	484	352	338	313	256	234	287	269	277	5312
	Pacific	2034	1879	1709	1568	1483	1376	1187	945	777	754	654	632	688	477	441	16604
	Total	**3712**	**3250**	**3061**	**3101**	**3019**	**2704**	**2573**	**2207**	**2025**	**1821**	**1668**	**1549**	**1745**	**1603**	**1430**	**35468**
S. sonnei	New England	1573	435	428	302	456	264	341	248	739	299	185	230	227	176	184	6087
	Mid Atlantic	1020	880	985	1325	1527	2048	1664	1470	547	1536	744	1090	1555	709	610	17710
	East North Central	1176	1671	2440	1707	1773	896	1242	1354	1592	1896	1726	1288	1245	601	362	20969
	West North Central	255	478	698	1166	1281	575	405	538	696	1971	1216	534	403	306	1161	11683
	South Atlantic	1210	1451	2280	2695	1966	1772	999	1121	396	1003	1141	3454	1976	951	642	23057
	East South Central	768	699	1369	1341	929	460	532	1209	681	534	608	606	600	721	982	12039
	West South Central	891	721	1737	903	1303	857	1193	1292	986	948	705	1314	2416	1979	2396	19641

TABLE 9

Laboratory confirmed Shigella isolates reported to the CDC by Species, Geographic Region and Year for 1991-2005

		Year															
Species	**Region**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
	Mountain	1601	722	824	920	2180	1115	695	374	408	511	408	647	711	319	602	12037
	Pacific	2240	3049	3578	2087	3396	2275	1736	1781	1321	2105	1460	2038	1488	671	856	30081
	Total	**10734**	**10106**	**14339**	**12446**	**14811**	**10262**	**8807**	**9387**	**7366**	**10803**	**8193**	**11201**	**10621**	**6433**	**7795**	**153304**
Unknown	New England	72	3		1	1	3	2		2	3	7	6	2	1	1	104
	Mid Atlantic			6	3	7	2	1	5	13	9	7	1		21	27	102
	East North Central	97	116	55		1		5	1	6	5	14	2	3	2	229	536
	West North Central	25	25	62	72	32	14	1	1	7	16	36	14	2	42	51	400
	South Atlantic	217	130	393	1720	10		5	3		15	6	3	6	10	5	2523
	East South Central	320	149	422	356	285	93			2	31	11	14	84	67	29	1863
	West South Central	3	2			2	1		16	33	85	13	1697	2933	719	383	5887
	Mountain	114	62	116	136	31		6			7	81	31	17	27	60	688
	Pacific	754	730	731	647	812	614	582	570	426	468	389	403	347	212	297	7982
	Total	**1602**	**1217**	**1785**	**2935**	**1181**	**727**	**602**	**596**	**489**	**639**	**564**	**2171**	**3394**	**1101**	**1082**	**20085**

TABLE 10

Laboratory confirmed Shigella isolates reported to the CDC by Species, State and Year for 1991-2005

		Year															
Species	**State**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
All *Shigella*	Alabama	450	160	341	479	383	110	193	220	63	79	152	352	183	153	247	3565
	Alaska	30	19	21	14	10	59	3	7	5	3	7	1	6	1	15	201
	Arizona	577	399	369	401	815	695	694	348	413	350	302	439	364	247	387	6800
	Arkansas	91	18	100	61	96	100	60	67	27	63	154		79	61	35	1012
	California	4473	5217	5175	3757	5347	3879	3222	3033	2358	2865	2149	2742	2253	1180	1408	49058
	Colorado	216	364	614	529	485	484	199	164	164	221	254	209	327	151	339	4720
	Connecticut	108	131	212	146	148	121	81	66	70	70	60	107	71	68	50	1509
	Delaware	4	7	60	11	125	66	21	38	11	23	16	446	158	11	10	1007
	District of Columbia	45	63	26	19	199	200	8							4	5	569
	Florida	378	263	248	721	319	275	245	539	154	107	44	154	9	16	6	3478
	Georgia	532	560	494	2062	176	173	244	252	83	194	465	895	636	477	473	7716
	Hawaii	80	119	89	193	102	86	55	51	36	33	61	61	42	46	31	1085
	Idaho		13	16	30	74	54	39	15	12	25	15	15	31	13	16	368
	Illinois	759	910	1142	1030	1215	525	842	1308	1018	941	374	771	876	313	314	12338
	Indiana	334	209	173	181	103	71	30	43	118	157	66	38	43	50	46	1662
	Iowa	30	42	45	323	240	115	72	46	62	350	291	67	57	68	58	1866
	Kansas	56	83	110	57	106	32	80	62	57	147	42	62	101	57	114	1166
	Kentucky	204	28	45	83	86	45	40	45	149	121	336	79	70	75	284	1690
	Louisiana	120	87	303	314	378	344	114	288	137	200	238	546	399	284	97	3849
	Maine	4	9	2	4		6				11	3	1	7	6	15	68
	Maryland	50	276	262	201	226	447	176	69	58	115	104	918	463	112	78	3555
	Massachusetts	1387	240	256	209	288	169	299	260	731	262	190	184	221	171	173	5040
	Michigan	193	494	645	329	454	341	249	5	489	610	232	174	217	184	124	4740
	Minnesota	80	90	236	467	166	164	141	334	254	926	500	226	106	57	96	3843
	Mississippi	261	117	382	461	333	179		7	11	7	32	32	19	16	35	1892
	Missouri	139	273	336	292	609	272	161	136	353	466	215	226	186	158	851	4673
	Montana	136	120	12	2	203	28	5	3	3	6	1	1	2	4	4	530
	Nebraska	1	6	1	2	4	4	17	19	68	117				47	79	365
	Nevada	2	6	3	2	19	13	13	20	6	66	50	47	44	57	51	399
	New Hampshire	40	6	10	10	79	26	21	22	17	8	4	14	13	7	10	287
	New Jersey	226	220	274	388	675	342	480	652	236	440	227	364	208	199	176	5107
	New Mexico	303	164	272	235	408	177	192	177	109	119	87	185	209	109	123	2869
	New York	361	451	453	697	548	305	790	828	331	840	511	487	616	588	430	8236
	North Carolina	228	307	1089	1130	593	186	173	183	93	271	186	527	334	133	90	5523
	North Dakota	25	13	13	59	126	58	3	3	2	52	41	7	6	10	2	420
	Ohio	97	77	585	276	260	221	307	153	150	332	1197	429	241	117	111	4553
	Oklahoma	130	97	214	85	132	157	134	213	171	45	75	376	626	379	559	3393
	Oregon	350	144	108	87	113	125	173	156	91	113	113	102	104	78	85	1942
	Pennsylvania	676	400	488	477	535	1593	604	259	183	446	229	363	854	109	139	7355
	Rhode Island	214	163	32	43	65	43	83	13	29	34	25	18	22	16	21	821
	South Carolina	38	68	113	180	115	78	30	99	64	94	124	81	290	286	75	1735
	South Dakota	72	82	87	168	140	54	20	23	10	6	243	45	11	13	90	1064
	Tennessee	193	561	1049	709	440	242	343	958	476	380	127	189	448	590	483	7188
	Texas	875	690	1277	602	898	382	1080	901	877	861	328	2170	4399	2161	2228	19729
	Utah	1014	108	54	235	705	212	95	36	68	84	62	37	60	54	44	2868
	Vermont	4	6	8	2	6	8	2	5	4		6	1	4	5	11	72
	Virginia	257	165	530	466	401	456	226	87	66	350	382	594	251	113	102	4446

TABLE 10

Laboratory confirmed Shigella isolates reported to the CDC by Species, State and Year for 1991-2005

		Year															
Species	**State**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
	Washington	369	396	820	398	278	284	212	192	116	414	236	226	191	132	110	4374
	West Virginia	33	18	38		27	31	13	8	5	17	10	9	4	8	1	222
	Wisconsin	260	464	271	154	73	32	29	71	78	56	28	49	85	149	148	1947
	Wyoming			8	2	4	2	1	1	1	3	5	2	5		5	39
	Total	**16505**	**14923**	**19511**	**18783**	**19330**	**14071**	**12314**	**12485**	**10087**	**13500**	**10599**	**15068**	**15951**	**9343**	**10484**	**212954**
S. boydii	Alabama															2	2
	Alaska			1													1
	Arizona	17	6	5	5	22	73	26	9	13	20	11	14	10	6	7	244
	Arkansas														1		1
	California	171	151	105	81	91	102	105	103	54	65	31	38	55	61	41	1254
	Colorado	4	3	3	3	5	6	10	5	3	8	1	1	3	8	7	70
	Connecticut	2	2		3	3	1	1	3		1				1	2	19
	Delaware			1	1							1				1	4
	District of Columbia	1				2											3
	Florida	2					1	1	1								5
	Georgia	2	1	2	19		1	1		4	6	3	2		12	1	54
	Hawaii		1			1	1		2			2					7
	Idaho								1		1	4	1	3	2		12
	Illinois	9	9	26	10	18	15	16	22	16	7	5	3	6	7	8	177
	Indiana	3			2	1			1	1	1		1	1	1		12
	Iowa		1		1		1				4	4	2		3		16
	Kansas	2			1	1		1	1		1		2				9
	Kentucky		1				2							1	1		5
	Louisiana	1		2		1	1	1		2		2				2	12
	Maine											1					1
	Maryland	2	2	4	3		2	2	2	1	2	2	1		5		28
	Massachusetts	10	2			6	4	10	3	7	6	4	4	9	7	6	78
	Michigan	3	2	3	2	7	1	4		3	3	3	5	4	4	3	47
	Minnesota	1	1		3	4	2	3	3	5	1	2	2	2	3	1	33
	Missouri	3	1		2	1						1					8
	Montana							1					1				2
	Nebraska									1	1				1		3
	Nevada	1				1	4	1	2		1	1				1	12
	New Hampshire												1		1	3	5
	New Jersey	1		3	5	3	3	4	2	3	7	4		5	3	4	47
	New Mexico	7	4	6	6	3	3	1	4	2	5	6	1	6	1	5	60
	New York	4	6	6	7	7	2	8	8	9	8	7	10	4	5		91
	North Carolina	1			2	1	1	1	5	1	3		1	3			19
	Ohio	3		1	4	4	1		2	2		3	1	1		1	23
	Oklahoma			1	3	1			1	2	2		1	1			12
	Oregon	1	6	7	3	2	3	4	5	3	3	4	2	4	1		48
	Pennsylvania	5		2	3	2		1			1	4	1	2	1	1	23
	Rhode Island				2	1	1	3		1			1	1			10
	South Carolina		1	1						1	1	1			1		6
	South Dakota	1													4	5	10
	Tennessee			4	1			1	2		1	2					11
	Texas	43	11	26	20	25	18	25	14	14	10	3	4	23	22	16	274

TABLE 10

Laboratory confirmed Shigella isolates reported to the CDC by Species, State and Year for 1991-2005

		Year															
Species	**State**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
	Utah	1	1		3	1	5	2	1	5	3	5				1	28
	Vermont					1									1	1	3
	Virginia		1	2	2	4	5	2	1	2	2	5	2	1	2	4	35
	Washington	9	6	10	8	9	14	15	5	2	5	3			3		89
	West Virginia												1		1		2
	Wisconsin	2	5		1	1	2	3		1	1	1	1	3		1	22
	Wyoming				1												1
	Total	**312**	**224**	**221**	**207**	**229**	**275**	**253**	**208**	**158**	**180**	**126**	**104**	**148**	**169**	**124**	**2938**
S. dysenteriae	Alabama		1	1				2								1	5
	Alaska			1													1
	Arizona	6	2	3	3	4	16	8	11	5	4	1	1	3	1	5	73
	Arkansas				1		1										2
	California	86	69	65	51	50	40	27	25	20	23	21	18	12	9	13	529
	Colorado	3	2	7	2	2	1	2	3	2			1	2	2	4	33
	Connecticut		2				1		5				1	2		1	12
	District of Columbia						2										2
	Florida	1	2	1			3		1		1	2					11
	Georgia	1		2	3		1	1	1	1		3					13
	Hawaii						1	1									2
	Idaho											1					1
	Illinois	4	18	2	3	10	4		7	5	1		3	2	2	7	68
	Indiana	2	2	1	1				2				3	1			12
	Kansas		3				1										4
	Kentucky				1				1						2		4
	Louisiana										1				1	1	3
	Maine															2	2
	Maryland	2	2					1			2	1		1		1	10
	Massachusetts	6	2			2	5	3	5	2	2	2	3	2	2	2	38
	Michigan	3		1	1	1	1	2		3	2			3			17
	Minnesota			1	2	1	1	2	1	2		3	1	1	1		16
	Missouri	1											1			1	3
	Montana		1														1
	Nebraska		1														1
	Nevada			1													1
	New Hampshire							1									1
	New Jersey	2	1	2	1		5	2	5	1	3	3		2	1		28
	New Mexico	2		1	2		1	2	2				2				12
	New York	4	5		4	4	1	3	2	1	7		3	4		2	40
	North Carolina	1					1	2	1	1					1		7
	North Dakota		2														2
	Ohio				1		1			1	1		1	1			6
	Oklahoma	2	1				1	1									5
	Oregon		1	1	2	1	2	4	2	1	1	1			1	1	18
	Pennsylvania		2		1	2		3			1	4	3	2	2	1	21
	Rhode Island		2					2		1		1					6
	Tennessee			3	2			1						1	2		9
	Texas	8	1	6	7	5	5	4	9	1	2	1		2	6	5	62

TABLE 10

Laboratory confirmed Shigella isolates reported to the CDC by Species, State and Year for 1991-2005

		Year															
Species	**State**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
	Utah	1			1						1	1	1				5
	Vermont					1											1
	Virginia	1		1	2	2	1	1	3		1	2				2	16
	Washington	7	3	5	2	5	5	4	1	2	4	1	1	2	2		44
	Wisconsin	2	1				2								2	4	11
	Wyoming				1												1
	Total	**145**	**126**	**105**	**94**	**90**	**103**	**79**	**87**	**49**	**57**	**48**	**43**	**43**	**37**	**53**	**1159**
S. flexneri	Alabama	3		2	11	5	7	7	5	5	8	8	7	10	7	10	95
	Alaska	4	2	6	4		6	1		4		3		4	1	4	39
	Arizona	259	225	212	197	263	279	287	202	192	158	140	112	134	136	103	2899
	Arkansas	1	2	1	2		2		4	2	4	2		7	28	11	66
	California	1831	1689	1478	1323	1269	1130	1000	767	631	610	477	511	548	365	349	13978
	Colorado	71	52	44	61	87	83	58	57	64	55	40	57	65	50	94	938
	Connecticut	13	26	13	25	18	15	23	15	20	15	21	17	18	24	17	280
	Delaware	1	1	1	2	3		5	1	5	11	4	3	7	6	3	53
	District of Columbia	24	18	13	15	28	10	4							3	4	119
	Florida	4	8	9	5	12	10	11	8	10	7	9	8		6		107
	Georgia	27	32	44	198	41	30	26	43	47	53	51	57	61	75	76	861
	Hawaii	57	72	63	68	57	67	31	25	25	17	39	32	33	34	21	641
	Idaho		3	7	13	2	4	9	9	6	8	3	3	8	7	7	89
	Illinois	222	208	204	157	192	167	124	163	159	110	65	81	103	111	44	2110
	Indiana	24	8	12	17	17	14	8	11	13	15	11	11	12	12	11	196
	Iowa	8	7	5	11	9	13	15	6	9	10	6	11	4	9	13	136
	Kansas	13	7	6	9	5	9	4	12	11	7	7	5	9	8	8	120
	Kentucky	4		2	6	2		13	2		2	2	2	11	11	9	66
	Louisiana	16	8	13	10	12	14	11	15	5	5	3	27	26	21	13	199
	Maine	1	4		1		6				1			3	2	6	24
	Maryland	11	31	45	61	32	32	18	29	21	19	34	26	43	33	32	467
	Massachusetts	71	60	69	66	73	50	90	81	60	43	53	49	61	47	48	921
	Michigan	45	82	51	39	59	54	34		37	30	42	43	41	27	22	606
	Minnesota	20	20	16	75	28	53	40	39	37	22	30	34	28	19	26	487
	Mississippi	1	2		1				2		1	4	6	3	3		23
	Missouri	18	8	7	10	8	11	11	11	14	18	17	23	11	10	22	199
	Montana	9	1	1	1	6	1		2		1			1	2	1	26
	Nebraska						1		1	15	10				4	1	32
	Nevada	1	2			5		6	8	6	14	17	9	9	16	12	105
	New Hampshire	2	3	3	2	3	3	2	2	7	3	1	5	5	2	2	45
	New Jersey	43	42	42	49	69	49	46	85	59	44	38	16	22	56	13	673
	New Mexico	110	75	89	52	78	65	74	53	48	38	29	35	52	39	40	877
	New York	122	93	125	128	107	81	101	126	93	86	139	58	57	59	49	1424
	North Carolina	26	23	30	22	32	20	34	23	24	22	35	32	25	11	23	382
	North Dakota	1	3	5			1	1	1	1	1	4		5			23
	Ohio	10	9	6	5	9	16	7	13	10	21	20	13	24	33	22	218
	Oklahoma	11	9	4	5	14	8	4	3	6	4	6	8	10	7	7	106
	Oregon	31	19	47	32	37	61	54	60	51	38	56	25	42	24	21	598
	Pennsylvania	62	42	44	36	30	49	41	36	24	24	17	32	25	39	38	539
	Rhode Island	7	13	5	12	19	18	8	4	10	12	9	7	5	8	4	141

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Laboratory confirmed Shigella isolates reported to the CDC by Species, State and Year for 1991-2005

		Year															
Species	**State**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
	South Carolina	7	9	1	7	5	3	7	5	1	3	7	7	5	6	14	87
	South Dakota	55	32	28	16	21	17	11	9	8	2	6	4	2		1	212
	Tennessee	12	14	14	13	21	14	20	9	11	10	12	17	10	20	16	213
	Texas	240	137	104	111	141	75	149	115	161	108	60	41	85	101	85	1713
	Utah	41	13	24	29	23	8	50	21	21	38	27	16	18	19	20	368
	Vermont		1	2		2	2			2		4	1	3	1	1	19
	Virginia	24	15	28	33	43	15	15	27	19	19	22	26	16	37	31	370
	Washington	111	97	115	141	120	112	101	93	66	89	79	64	61	53	46	1348
	West Virginia			2			2				1	2	1	1		1	10
	Wisconsin	38	23	14	20	12	16	12	4	4	3	7	5	12	11	29	210
	Wyoming			5			1			1	1		2				10
	Total	**3712**	**3250**	**3061**	**3101**	**3019**	**2704**	**2573**	**2207**	**2025**	**1821**	**1668**	**1549**	**1745**	**1603**	**1430**	**35468**
S. sonnei	Alabama	361	111	200	356	281	103	184	215	58	71	144	345	173	146	234	2982
	Alaska	26	17	13	10	10	53	2	7	1	3	4	1	2		11	160
	Arizona	294	166	149	196	523	327	373	126	203	168	140	308	216	104	271	3564
	Arkansas	89	16	99	58	96	97	60	63	25	59	152		72	32	24	942
	California	1632	2580	2806	1657	3126	1993	1508	1568	1227	1700	1237	1779	1291	533	708	25345
	Colorado	112	245	444	329	365	394	129	99	95	151	144	129	243	88	184	3151
	Connecticut	93	101	199	117	127	104	57	43	48	53	38	87	50	42	29	1188
	Delaware	3	6	58	8	122	66	16	37	6	12	11	443	151	5	6	950
	District of Columbia	20	45	12	4	166	188	4							1	1	441
	Florida	371	252	237	694	305	261	233	529	144	99	32	146	9	10	6	3328
	Georgia	293	404	68	149	131	141	213	205	31	123	407	835	571	387	395	4353
	Hawaii	23	46	26	125	44	17	23	24	11	16	20	29	9	12	10	435
	Idaho		10	9	17	72	50	30	5	6	16	6	10	20	4	9	264
	Illinois	524	674	910	860	995	339	702	1116	835	820	303	683	764	192	33	9750
	Indiana	238	168	160	161	85	57	22	29	104	141	52	23	27	37	35	1339
	Iowa	18	27	34	263	231	101	57	40	53	336	279	54	53	56	45	1647
	Kansas	41	73	104	47	100	22	75	49	46	139	35	55	92	49	106	1033
	Kentucky	200	27	43	76	84	43	27	42	149	119	334	77	58	61	275	1615
	Louisiana	103	78	288	304	365	329	102	273	130	194	233	519	373	259	81	3631
	Maine	3	5	2	3						8		1	4	4	7	37
	Maryland	35	239	213	134	194	413	154	38	36	91	66	891	417	68	43	3032
	Massachusetts	1300	176	187	143	206	109	194	171	662	211	127	124	148	115	117	3990
	Michigan	142	408	590	287	387	285	209	5	445	575	185	125	169	153	99	4064
	Minnesota	42	54	166	385	133	105	95	290	204	887	455	181	73	34	69	3173
	Mississippi	26	14	98	217	146	86		5	11	6	28	26	16	13	35	727
	Missouri	117	264	329	280	599	260	150	125	339	448	197	199	175	148	828	4458
	Montana	122	118	11	1	196	27	4	1	3	5	1		1	2	3	495
	Nebraska	1	5	1	2	4	3	17	18	51	106				10	27	245
	Nevada		4	2	2	13	9	4	10		51	32	36	33	17	29	242
	New Hampshire	29	3	7	8	76	21	18	20	10	5	3	8	8	4	5	225
	New Jersey	180	177	222	331	599	285	428	558	171	385	181	348	179	138	159	4341
	New Mexico	184	85	176	175	327	108	111	118	59	76	52	144	151	69	78	1913
	New York	231	347	321	557	427	219	677	689	219	735	359	415	551	505	352	6604
	North Carolina	200	284	1059	1105	560	164	136	154	67	246	151	494	306	121	67	5114
	North Dakota	20	5	5	37	95	47	2	2	1	51	13	4	1		2	285

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Laboratory confirmed Shigella isolates reported to the CDC by Species, State and Year for 1991-2005

		Year															
Species	**State**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
	Ohio	84	68	575	266	246	203	295	137	135	308	1166	414	215	83	82	4277
	Oklahoma	116	87	209	77	116	147	129	208	163	39	69	366	613	371	551	3261
	Oregon	317	116	53	50	73	59	111	89	36	70	48	70	58	52	63	1265
	Pennsylvania	609	356	442	437	501	1544	559	223	157	416	204	327	825	66	99	6765
	Rhode Island	144	147	27	29	45	24	70	9	17	22	15	10	16	8	17	600
	South Carolina	31	58	111	172	110	75	23	94	62	90	115	74	285	279	60	1639
	South Dakota	16	50	59	152	119	37	9	14	2	4	237	41	9	9	84	842
	Tennessee	181	547	1028	692	418	228	321	947	463	338	102	158	353	501	438	6715
	Texas	583	540	1141	464	726	284	902	748	668	656	251	429	1358	1317	1740	11807
	Utah	889	94	30	200	680	199	43	14	42	42	29	20	42	35	23	2382
	Vermont	4	3	6	2	2	6	2	5	2		2		1	3	9	47
	Virginia	232	148	498	429	351	435	207	56	45	326	351	564	234	73	64	4013
	Washington	242	290	680	245	143	153	92	93	46	316	151	159	128	74	64	2876
	West Virginia	25	15	24		27	29	13	8	5	16	8	7	3	7		187
	Wisconsin	188	353	205	133	60	12	14	67	73	52	20	43	70	136	113	1539
	Wyoming			3		4	1	1	1		2	4		5		5	26
	Total	**10734**	**10106**	**14339**	**12446**	**14811**	**10262**	**8807**	**9387**	**7366**	**10803**	**8193**	**11201**	**10621**	**6433**	**7795**	**153304**
Unknown	Alabama	86	48	138	112	97											481
	Arizona	1				3						10	4	1		1	20
	Arkansas	1															1
	California	753	728	721	645	811	614	582	570	426	467	383	396	347	212	297	7952
	Colorado	26	62	116	134	26					7	69	21	14	3	50	528
	Connecticut				1					2	1	1	2	1	1	1	10
	District of Columbia			1		3											4
	Florida		1	1	22	2						1					27
	Georgia	209	123	378	1693	4		3	3		12	1	1	4	3	1	2435
	Idaho											1	1				2
	Illinois		1							3	3	1	1	1	1	222	233
	Indiana	67	31									3		2			103
	Iowa	4	7	6	48							2					67
	Louisiana		1												3		4
	Maine										2	2					4
	Maryland		2		3			1			1	1		2	6	2	18
	Massachusetts					1	1	2				4	4	1			13
	Michigan		2							1		2	1				6
	Minnesota	17	15	53	2		3	1	1	6	16	10	8	2			134
	Mississippi	234	101	284	243	187	93										1142
	Missouri					1	1						3				5
	Montana	5				1											6
	Nebraska									1					32	51	84
	Nevada							2					2	2	24	9	39
	New Hampshire	9					2										11
	New Jersey			5	2	4			2	2	1	1			1		18
	New Mexico							4					3				7
	New York			1	1	3	2	1	3	9	4	6	1		19	27	77
	North Carolina				1												1
	North Dakota	4	3	3	22	31	10					24	3		10		110

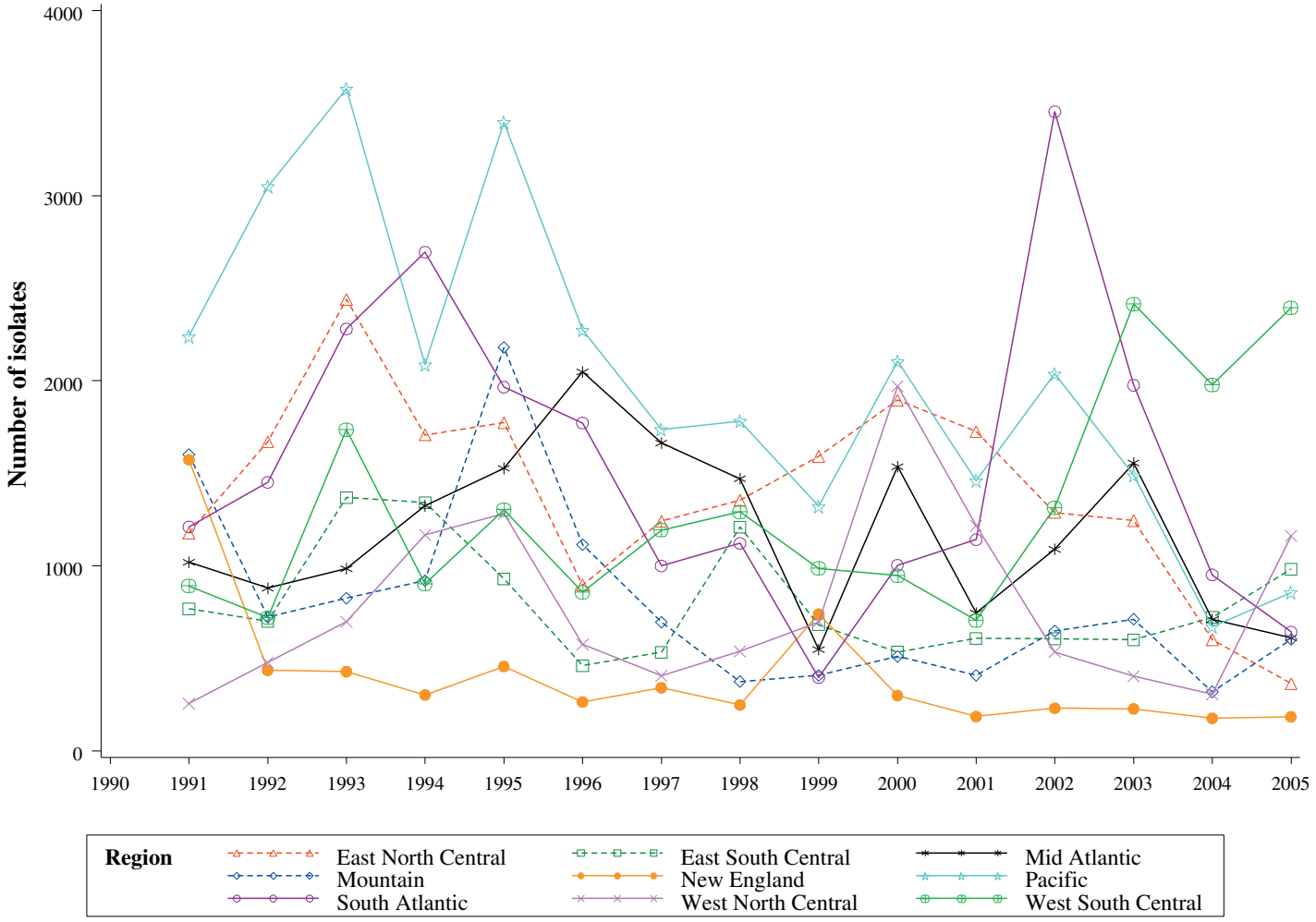
TABLE 10

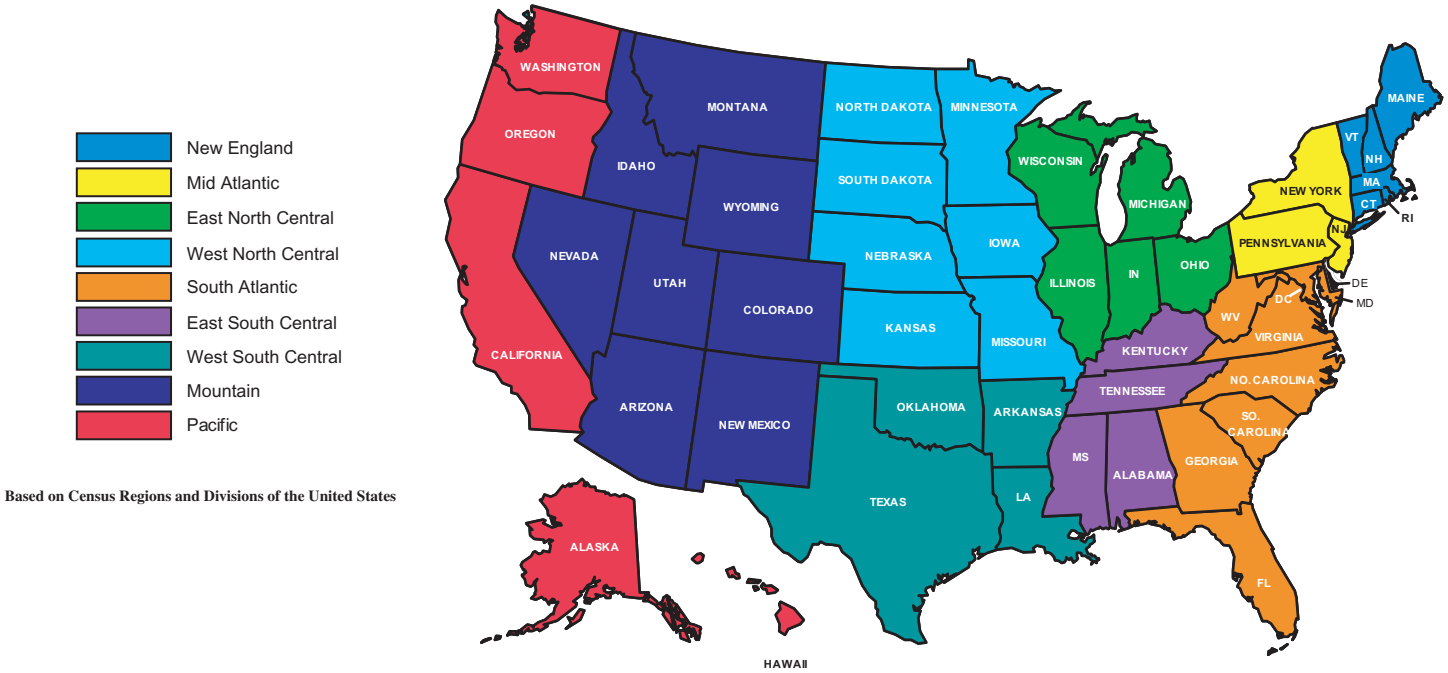
Laboratory confirmed Shigella isolates reported to the CDC by Species, State and Year for 1991-2005

		Year															
Species	**State**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
	Ohio			3		1		5	1	2	2	8			1	6	29
	Oklahoma	1				1	1		1				1	2	1	1	9
	Oregon	1	2								1	4	5				13
	Pennsylvania									2	4				1		7
	Rhode Island	63	1														64
	South Carolina				1							1				1	3
	Tennessee				1	1				2	31	11	14	84	67	29	240
	Texas	1	1			1			15	33	85	13	1696	2931	715	382	5873
	Utah	82			2	1											85
	Vermont		2														2
	Virginia		1	1		1		1			2	2	2		1	1	12
	Washington			10	2	1						2	2				17
	West Virginia	8	3	12													23
	Wisconsin	30	82	52												1	165
	Wyoming											1					1
	Total	**1602**	**1217**	**1785**	**2935**	**1181**	**727**	**602**	**596**	**489**	**639**	**564**	**2171**	**3394**	**1101**	**1082**	**20085**

FIGURE 3

Laboratory confirmed *S. sonnei* isolates reported to the CDC by Geographical Region and Year for 1991-2005





Based on Census Regions and Divisions of the United States