

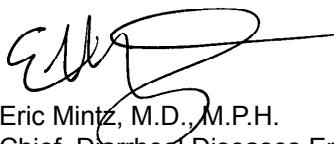
# *Sharing*



# *Annual Summary* **2003**

Department of Health and Human Services  
Centers for Disease Control and Prevention  
National Center for Infectious Diseases  
Division of Bacterial and Mycotic Diseases  
Foodborne and Diarrheal Diseases Branch  
Atlanta, Georgia 30333

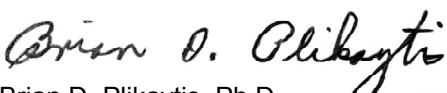




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## **Laboratory-Confirmed *Shigella* Surveillance Annual Summary, 2003**

The Annual Summary contains surveillance data on reported laboratory-confirmed *Shigella* isolates 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 Foodborne and Diarrheal Diseases Branch (FDDB) and the Biostatistics and Information Management Branch (BIMB) of the Division of Bacterial and Mycotic Diseases in the National Center for Infectious 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	<i>S. dysenteriae</i>	15	-	-
B	<i>S. flexneri</i>	8 <sup>a</sup>	+	+
C	<i>S. boydii</i>	20	+	-
D	<i>S. sonnei</i>	1	+	-

<sup>a</sup> = Serotypes 1-5 are subdivided into 11 subserotypes.

The Statistical Outbreak Detection Algorithm (SODA), developed by BIMB and FDDB, 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 2003**

A total of 11,552 *Shigella* isolates were reported from public health laboratories in 50 states in 2003 (Table 1). This represents a 41% decrease compared with 1993 and a 11% decrease from 2002. The national rate of reported *Shigella* isolates in 2003 was 4.0 per 100,000 population based on 2003 census population estimate figures for the United States.

Similar to previous years, *Shigella* was isolated frequently from children under 5 years of age, who accounted for 30.5% of all isolates. About 30.1% of all isolates came from persons aged 5-19 years, and 29.7% from persons aged 20-59, with declining numbers thereafter. 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 48.6% of persons from whom *Shigella* was isolated. Gender differences were most notable for a preponderance of females in four age groups, 10-19 (54.4%), 20-29 (63.3%), 60-69 (58.4%), and 70-79 (55.5%) and for a relative paucity of females in three age groups 30-39 (46.7%), 40-49 (41.5%), and 80+ (37.1%). These gender differences reflect similar findings among reported isolates of *Shigella sonnei*. Among reported isolates of *Shigella flexneri*, a male predominance is seen, particularly in the age groups 20-29 (58.3%), 30-39 (71.4%), and 40-49 (73.1%). These estimates, however, are not complete since Wyoming did not report the age of persons from whom *Shigella* isolates were obtained. In addition, gender information was not reported for 5.3% of all isolates and age information was not reported for 5.4% of isolates.

The frequency of reported species, and the frequency of reported serotypes within these groups for all *Shigella* isolates are shown in Tables 1 and 2. Of the 11,552 isolates, 11,089 (96.0%) were subgrouped. Trends of subgroups remained constant, with subgroup D (*S. sonnei*) accounting for the largest percentage of isolates (80.2%), followed by subgroup B (*S. flexneri*, 14.4%), subgroup C (*S. boydii*, 1.1%) and subgroup A (*S. dysenteriae*, 0.4%). *Shigella* isolate serotype trends by year are shown in Table 5 and in Figure 2. Over the past decade, the numbers of reported *Shigella* isolates in subgroups A, B and C, and the proportions of all reported *Shigella* isolates due to these three subgroups have declined; however, 2003 marks the first year since 1994 in which the reported numbers of *Shigella* subgroup B (*S. flexneri*) isolates have increased. A very slight increase in the number of *S. boydii* was also observed. The number (463) and the proportion (4.0%) of all reported *Shigella* isolates that were not identified as belonging to a specific subgroup also increased. The highest numbers and proportions of all reported *Shigella* isolates that were not identified as belonging to a specific subgroup were reported by California (347, 15.4%) and Tennessee (84, 18.8%).

*Shigella* transmission occurs via the fecal-oral route. The majority of 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 that can last many months and affect many persons (2, 3). From December 2001 through at least March 2003, a prolonged multi-state daycare-associated outbreak of *S. sonnei* infections in the South and Mid-Atlantic regions contributed significantly to the national burden of culture-confirmed shigellosis (4). *S. sonnei* has also been transmitted through unchlorinated wading pools

(5), interactive water fountains (6), food items such as parsley (7) and bean dip (8), and men who have sex with men (MSM) (9). Until recently, the dominant subgroup causing illness among MSM was subgroup B (*S. flexneri*) (10). However, in a large outbreak among MSM in San Francisco, the dominant serotype was subgroup D (*S. sonnei*) (9). Recent trends in shigellosis in the United States are reviewed in a publication by Dr. Amita Gupta and co-authors (11).

Geographic trends by region for subgroup D (*S. sonnei*) isolates from 1989 to 2003 are illustrated in Figure 3. Only the Mid Atlantic, West South Central, and Mountain regions registered increases in subgroup D (*S. sonnei*) isolates from 2002 to 2003.

### **Acknowledgements**

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**TABLE 1**  
**Laboratory confirmed *Shigella* isolates reported to the CDC by Species in 2003**

Rank	Species	Reported	Percent
1	<i>S. sonnei</i>	9263	80.2
2	<i>S. flexneri</i>	1660	14.4
3	<i>S. boydii</i>	125	1.1
4	<i>S. dysenteriae</i>	41	0.4
	<b>Sub Total</b>	<b>11089</b>	<b>96.0</b>
	Unknown	463	4.0
	<b>Sub Total</b>	<b>463</b>	<b>4.0</b>
	<b>Total</b>	<b>11552</b>	<b>100</b>

**TABLE 2**  
**Laboratory confirmed *Shigella* isolates reported to the CDC by Serotype in 2003**

Rank	Serotype	Reported	Percent
1	<i>S. sonnei</i>	9263	80.2
2	<i>S. flexneri</i> unspecified	813	7.0
3	<i>S. flexneri</i> 2 unspecified	186	1.6
4	<i>S. flexneri</i> 3 unspecified	112	1.0
5	<i>S. flexneri</i> 1 unspecified	100	0.9
6	<i>S. flexneri</i> 2a	92	0.8
7	<i>S. flexneri</i> 3a	79	0.7
8	<i>S. boydii</i> unspecified	68	0.6
9	<i>S. flexneri</i> 4 unspecified	61	0.5
10	<i>S. flexneri</i> 6	58	0.5
11	<i>S. flexneri</i> 4a	49	0.4
12	<i>S. flexneri</i> 1b	31	0.3
13	<i>S. boydii</i> 2	29	0.3
14	<i>S. dysenteriae</i> unspecified	20	0.2
15	<i>S. flexneri</i> 2b	17	0.2
16	<i>S. flexneri</i> variant y	15	0.1
17	<i>S. flexneri</i> 3b	12	0.1
18	<i>S. boydii</i> 1	10	0.1
19	<i>S. dysenteriae</i> 2	10	0.1
20	<i>S. flexneri</i> 5 unspecified	10	0.1
21	<i>S. boydii</i> 4	9	0.1
22	<i>S. flexneri</i> 1a	6	0.1
23	<i>S. flexneri</i> 4b	6	0.1
24	<i>S. flexneri</i> variant x	6	0.1
25	<i>S. dysenteriae</i> 1	5	0.0
26	<i>S. flexneri</i> 88-893	5	0.0
27	<i>S. boydii</i> 10	2	0.0
28	<i>S. boydii</i> 8	2	0.0
29	<i>S. dysenteriae</i> 3	2	0.0
30	<i>S. dysenteriae</i> 4	2	0.0
31	<i>S. boydii</i> 12	1	0.0
32	<i>S. boydii</i> 14	1	0.0
33	<i>S. boydii</i> 15	1	0.0
34	<i>S. boydii</i> 20	1	0.0
35	<i>S. boydii</i> 5	1	0.0
36	<i>S. dysenteriae</i> 14	1	0.0
37	<i>S. dysenteriae</i> 9	1	0.0
38	<i>S. flexneri</i> 4c	1	0.0
39	<i>S. flexneri</i> 5a	1	0.0
	<b>Sub Total</b>	<b>11089</b>	<b>96.0</b>
	Unknown	463	4.0
	<b>Sub Total</b>	<b>463</b>	<b>4.0</b>
	<b>Total</b>	<b>11552</b>	<b>100.0</b>

**TABLE 3****Laboratory confirmed *Shigella* isolates reported to the CDC by Species, Age Group and Sex, 2003**

		Sex			
Species	Age Group	Female	Male	Unknown	Total
All <i>Shigella</i>	< 1 Year	102	112	8	222
	1 to 4 Years	1562	1643	99	3304
	5 to 9 Years	1239	1208	44	2491
	10 to 19 Years	535	420	27	982
	20 to 29 Years	741	409	21	1171
	30 to 39 Years	513	556	29	1098
	40 to 49 Years	313	424	17	754
	50 to 59 Years	203	200	6	409
	60 to 69 Years	118	81	3	202
	70 to 79 Years	66	51	2	119
	80+ Years	66	88	24	178
	Unknown Age	158	127	337	622
	<b>Total</b>	<b>5616</b>	<b>5319</b>	<b>617</b>	<b>11552</b>
<i>S. boydii</i>	< 1 Year	1	1		2
	1 to 4 Years	15	15		30
	5 to 9 Years	13	6	2	21
	10 to 19 Years	5	4		9
	20 to 29 Years	8	6		14
	30 to 39 Years	12	11	1	24
	40 to 49 Years	3	3		6
	50 to 59 Years	4	3		7
	60 to 69 Years	4	2		6
	70 to 79 Years	1	1		2
	80+ Years	2			2
	Unknown Age	1		1	2
	<b>Total</b>	<b>69</b>	<b>52</b>	<b>4</b>	<b>125</b>
<i>S. dysenteriae</i>	1 to 4 Years	3	6		9
	5 to 9 Years	3			3
	10 to 19 Years	3	3		6
	20 to 29 Years	5	3		8
	30 to 39 Years	1	1		2
	40 to 49 Years	2	3		5
	50 to 59 Years	3	1	1	5
	80+ Years		1	1	2
	Unknown Age			1	1
	<b>Total</b>	<b>20</b>	<b>18</b>	<b>3</b>	<b>41</b>
<i>S. flexneri</i>	< 1 Year	11	14	2	27
	1 to 4 Years	189	156	9	354
	5 to 9 Years	111	101	3	215
	10 to 19 Years	60	69	3	132
	20 to 29 Years	77	112	3	192
	30 to 39 Years	67	177	4	248
	40 to 49 Years	55	152	1	208
	50 to 59 Years	32	58	1	91
	60 to 69 Years	21	26		47
	70 to 79 Years	21	14		35

**TABLE 3****Laboratory confirmed *Shigella* isolates reported to the CDC by Species, Age Group and Sex, 2003**

Species	Age Group	Sex			Total
		Female	Male	Unknown	
	80+ Years	5	14	1	20
	Unknown Age	16	24	51	91
	<b>Total</b>	<b>665</b>	<b>917</b>	<b>78</b>	<b>1660</b>
<i>S. sonnei</i>	< 1 Year	88	89	6	183
	1 to 4 Years	1298	1407	88	2793
	5 to 9 Years	1077	1053	39	2169
	10 to 19 Years	445	319	24	788
	20 to 29 Years	618	263	18	899
	30 to 39 Years	401	349	24	774
	40 to 49 Years	242	248	15	505
	50 to 59 Years	152	125	4	281
	60 to 69 Years	84	45	2	131
	70 to 79 Years	37	30	2	69
	80+ Years	57	72	22	151
	Unknown Age	140	102	278	520
	<b>Total</b>	<b>4639</b>	<b>4102</b>	<b>522</b>	<b>9263</b>
Unknown	< 1 Year	2	8		10
	1 to 4 Years	57	59	2	118
	5 to 9 Years	35	48		83
	10 to 19 Years	22	25		47
	20 to 29 Years	33	25		58
	30 to 39 Years	32	18		50
	40 to 49 Years	11	18	1	30
	50 to 59 Years	12	13		25
	60 to 69 Years	9	8	1	18
	70 to 79 Years	7	6		13
	80+ Years	2	1		3
	Unknown Age	1	1	6	8
	<b>Total</b>	<b>223</b>	<b>230</b>	<b>10</b>	<b>463</b>

**TABLE 4**

**Median Age of persons from whom laboratory confirmed *Shigella* isolates reported to the CDC by Species and Year for 1989-2003**

Species	Year														
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<i>S. boydii</i>	23	10	21	18	20	19	14	9	19	21	8	25	25	21	19
<i>S. dysenteriae</i>	28	19	19	26	28	25	29	25	18	35	28	10	28	29	22
<i>S. flexneri</i>	22	18	18	18	17	18	17	21	16	17	9	10	14	21	23
<i>S. sonnei</i>	7	7	8	7	6	7	7	7	7	7	7	8	8	7	7
Unknown	8	7	8	10	7	6	6	7	25	6	7	12	22	10	12

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 1989-2003**

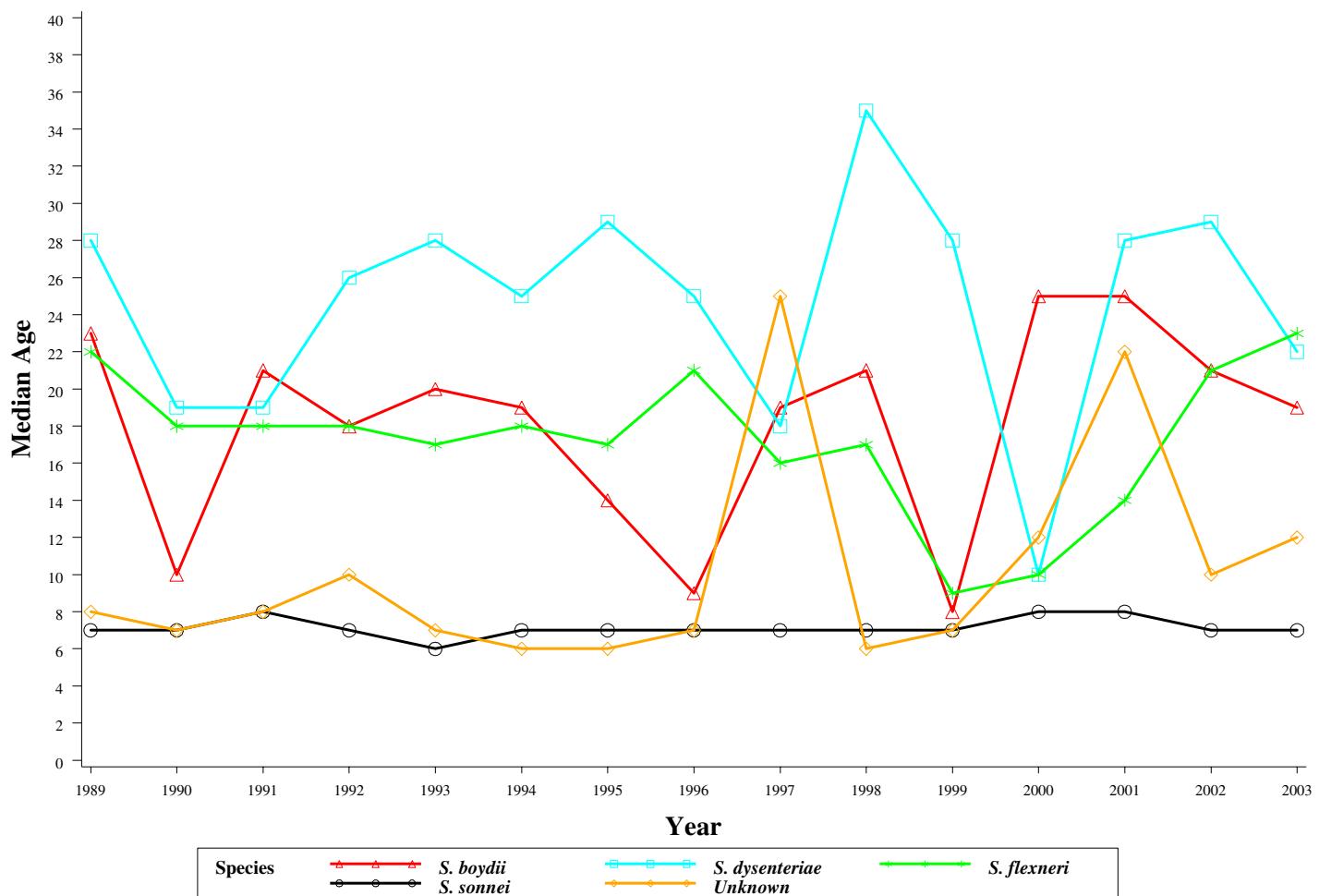


TABLE 5

Laboratory confirmed *Shigella* isolates reported to the CDC by Species and Year for 1989-2003

Species	Year														Total	
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
<i>S. boydii</i>	466	398	312	224	221	207	229	275	253	208	158	180	126	101	125	3483
<i>S. dysenteriae</i>	216	181	145	126	105	94	90	103	79	87	49	57	48	43	41	1464
<i>S. flexneri</i>	3682	4031	3712	3250	3061	3101	3019	2704	2573	2207	2025	1821	1668	1523	1660	40037
<i>S. sonnei</i>	10242	11116	10734	10106	14339	12446	14811	10262	8807	9387	7366	10803	8193	10851	9263	158726
Unknown	1366	1580	1602	1217	1785	2935	1181	727	602	596	489	639	564	475	463	16221
Total	15972	17306	16505	14923	19511	18783	19330	14071	12314	12485	10087	13500	10599	12993	11552	219931

FIGURE 2

Laboratory confirmed *Shigella* isolates reported to CDC by Species and Year for 1989-2003

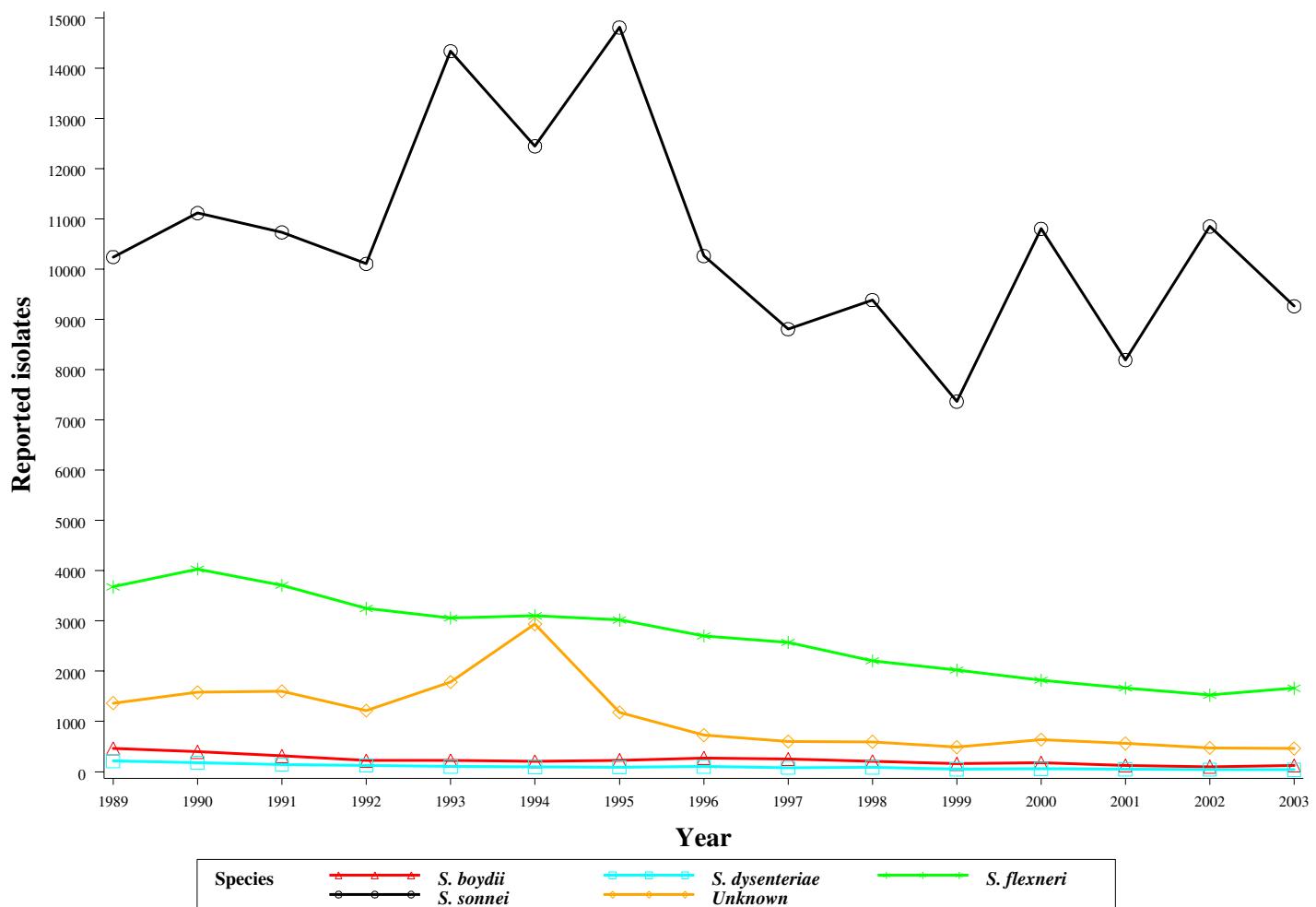


TABLE 6

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, Serotype and Year for 1989-2003

Species	Serotype	Year														Total	
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
<i>S. boydii</i>	<i>boydii</i> 1	16	12	13	7	14	9	15	22	12	12	13	13	11	7	10	
	<i>boydii</i> 2	55	57	55	19	54	49	60	82	54	43	28	38	26	22	29	
	<i>boydii</i> 3	2						2		2	2	2	2	3		15	
	<i>boydii</i> 4	29	11	21	10	12	16	21	14	20	12	16	15	4	10	9	
	<i>boydii</i> 5	3	5	2	2	2	1	1	1	3		2	7	2		1	
	<i>boydii</i> 6	1							1		2	5	4	1	2	16	
	<i>boydii</i> 7	1	1	1			1									4	
	<i>boydii</i> 8	1	1		1			1		4	1		2	2		2	
	<i>boydii</i> 9			1				1		1				1		4	
	<i>boydii</i> 10	14	25	11	5	2	3	7	10	9	5	5		1	2	2	
	<i>boydii</i> 11	2			2	2			2		1	2	2			13	
	<i>boydii</i> 12	2		1		1			2	2	2	3	2	6	2	1	
	<i>boydii</i> 13			1					1			2				4	
	<i>boydii</i> 14	15	13	9	6	10	7	12	13	11	5	8	5	3	1	1	
	<i>boydii</i> 15		1							1			2	4		1	
	<i>boydii</i> 17							1								1	
	<i>boydii</i> 18	4	4	1			1			2	2	1		1		16	
	<i>boydii</i> 19									2	4	1				7	
	<i>boydii</i> 20															1	
	<i>boydii</i> unspecified	321	268	196	172	124	120	108	127	130	117	70	88	62	54	68	
	<b>Sub Total</b>	<b>466</b>	<b>398</b>	<b>312</b>	<b>224</b>	<b>221</b>	<b>207</b>	<b>229</b>	<b>275</b>	<b>253</b>	<b>208</b>	<b>158</b>	<b>180</b>	<b>126</b>	<b>101</b>	<b>125</b>	<b>3483</b>
<i>S. dysenteriae</i>	<i>dysenteriae</i> 1	23	7	3	2	9	7	7	4	6	3	6	9	1	1	5	
	<i>dysenteriae</i> 2	29	23	20	21	11	8	10	16	17	37	12	5	8	5	10	
	<i>dysenteriae</i> 3	9	15	10	8	6	10	17	17	10	9	4	3	4	1	2	
	<i>dysenteriae</i> 4	7	3	3	3	1			3		1		3		5	2	
	<i>dysenteriae</i> 5								1					1		2	
	<i>dysenteriae</i> 6			1			1			1						3	
	<i>dysenteriae</i> 7	1	1									1				3	
	<i>dysenteriae</i> 8			1								1		2		4	
	<i>dysenteriae</i> 9	2	1	3	3		2	1	5	5		1	1	3	3	1	
	<i>dysenteriae</i> 10	1											1		2	4	
	<i>dysenteriae</i> 11		1						2	2						5	
	<i>dysenteriae</i> 12	1				1		1								3	
	<i>dysenteriae</i> 13			2												2	
	<i>dysenteriae</i> 14															1	
	<i>dysenteriae</i> unspecified	143	130	102	89	77	66	54	55	38	37	24	35	32	23	20	
	<b>Sub Total</b>	<b>216</b>	<b>181</b>	<b>145</b>	<b>126</b>	<b>105</b>	<b>94</b>	<b>90</b>	<b>103</b>	<b>79</b>	<b>87</b>	<b>49</b>	<b>57</b>	<b>48</b>	<b>43</b>	<b>41</b>	<b>1464</b>
<i>S. flexneri</i>	<i>flexneri</i> 1 unspecified	318	391	391	294	294	310	412	303	238	200	169	145	136	110	100	3811
	<i>flexneri</i> 1a	44	40	16	5	2	8	4	4	6	9	7	5	11	9	6	176
	<i>flexneri</i> 1b	172	167	63	26	12	54	17	7	18	26	25	13	19	23	31	673
	<i>flexneri</i> 2 unspecified	310	314	362	393	394	367	382	401	423	395	361	293	226	183	186	4990
	<i>flexneri</i> 2a	151	168	98	85	88	84	71	31	85	102	134	100	147	101	92	1537
	<i>flexneri</i> 2b	29	25	26	10	17	10	17	7	11	20	13	33	17	14	17	266
	<i>flexneri</i> 3 unspecified	125	118	154	158	165	131	246	255	248	155	93	96	95	70	112	2221
	<i>flexneri</i> 3a	57	36	31	22	11	13	11	26	26	28	65	55	34	51	79	545
	<i>flexneri</i> 3b	19	35	14	5	4	1	7	18	11	12	9	12	12	16	12	187
	<i>flexneri</i> 4 unspecified	167	106	120	126	91	116	139	124	108	116	75	72	67	74	61	1562

TABLE 6

*Laboratory confirmed Shigella isolates reported to the CDC by Species, Serotype and Year for 1989-2003*

Species	Serotype	Year														Total	
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
	<i>flexneri</i> 4a	37	57	8	11	19	7	12	17	13	13	34	35	55	53	49	420
	<i>flexneri</i> 4b	3	10	1	2	2	1		1		4				5	6	35
	<i>flexneri</i> 4c															1	1
	<i>flexneri</i> 5 unspecified	17	16	16	14	28	43	62	39	47	56	28	23	17	9	10	425
	<i>flexneri</i> 5a															1	1
	<i>flexneri</i> 6	138	99	92	72	67	141	107	119	118	78	79	68	71	59	58	1366
	<i>flexneri</i> unspecified	2093	2449	2320	2027	1867	1815	1528	1350	1214	985	916	853	738	734	813	21702
	<i>flexneri</i> variant x	1								3	6	2	2	2	4	6	26
	<i>flexneri</i> variant y	1						4	2	4	2	15	16	21	8	15	88
	<i>flexneri</i> 88-893 (Provisional)															5	5
	Sub Total	3682	4031	3712	3250	3061	3101	3019	2704	2573	2207	2025	1821	1668	1523	1660	40037
S. sonnei	<i>sonnei</i>	10242	11116	10734	10106	14339	12446	14811	10262	8807	9387	7366	10803	8193	10851	9263	158726
	Sub Total	10242	11116	10734	10106	14339	12446	14811	10262	8807	9387	7366	10803	8193	10851	9263	158726
Unknown	Unknown	1366	1580	1602	1217	1785	2935	1181	727	602	596	489	639	564	475	463	16221
	Sub Total	1366	1580	1602	1217	1785	2935	1181	727	602	596	489	639	564	475	463	16221
	Total	15972	17306	16505	14923	19511	18783	19330	14071	12314	12485	10087	13500	10599	12993	11552	219931

TABLE 7

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, Serotype and Month for 2003

		Month												
Species	Serotype	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<i>S. boydii</i>	<i>boydii</i> 1		1			1		2	1	1	2	1	1	10
	<i>boydii</i> 2	2			2	4		6	2	5	2	4	2	29
	<i>boydii</i> 4		2			2		2	1	1		1		9
	<i>boydii</i> 5											1		1
	<i>boydii</i> 8								2					2
	<i>boydii</i> 10						1		1					2
	<i>boydii</i> 12	1												1
	<i>boydii</i> 14							1						1
	<i>boydii</i> 15							1						1
	<i>boydii</i> 20	1												1
	<i>boydii</i> unspecified	3	5	3		4	7	6	11	6	8	6	9	68
	Sub Total	7	8	3	2	11	8	18	18	13	12	13	12	125
<i>S. dysenteriae</i>	<i>dysenteriae</i> 1		1		1	1			2					5
	<i>dysenteriae</i> 2				1			2	4	1		1	1	10
	<i>dysenteriae</i> 3							1	1					2
	<i>dysenteriae</i> 4						1		1					2
	<i>dysenteriae</i> 9					1								1
	<i>dysenteriae</i> 14										1			1
	<i>dysenteriae</i> unspecified	1	1	1	2	3	2		4	2	2	2		20
	Sub Total	1	2	1	4	5	3	3	12	3	3	3	1	41
<i>S. flexneri</i>	<i>flexneri</i> 1 unspecified	10	9	6	4	8	8	8	11	13	12	6	5	100
	<i>flexneri</i> 1a										4	1	1	6
	<i>flexneri</i> 1b	7	3	2		4	4	1	4	3	1	2		31
	<i>flexneri</i> 2 unspecified	13	13	12	11	12	13	17	26	22	20	15	12	186
	<i>flexneri</i> 2a	4	6	2	8	9	11	11	6	12	9	5	9	92
	<i>flexneri</i> 2b	3	1	1	1	2	2	1	3	1	2			17
	<i>flexneri</i> 3 unspecified	3	6	6	4	11	10	10	9	20	8	14	11	112
	<i>flexneri</i> 3a	8	6	9	4	6	4	13	10	3	8	6	2	79
	<i>flexneri</i> 3b	4	2	2	2			1			1			12
	<i>flexneri</i> 4 unspecified	1	1	6	7	8	4	6	6	8	4	5	5	61
	<i>flexneri</i> 4a	8	3	5	6	2	2	5	5	4	5	2	2	49
	<i>flexneri</i> 4b						1	1	2		1	1		6
	<i>flexneri</i> 4c										1			1
	<i>flexneri</i> 5 unspecified	1		1		1		2	2	3				10
	<i>flexneri</i> 5a						1							1
	<i>flexneri</i> 6	4	2	3	3	4	3	4	9	12	9	4	1	58
	<i>flexneri</i> unspecified	86	62	53	60	44	56	97	86	68	71	83	47	813
	<i>flexneri</i> variant x		1						2		1		2	6
	<i>flexneri</i> variant y	1	1	2			2	2		3	1	2	1	15
	<i>flexneri</i> 88-893 (Provisional)	1	1			1		2						5
	Sub Total	154	117	110	110	112	121	181	181	172	157	147	98	1660
<i>S. sonnei</i>	<i>sonnei</i>	819	578	600	580	1001	904	988	953	898	819	661	462	9263
	Sub Total	819	578	600	580	1001	904	988	953	898	819	661	462	9263
Unknown	Unknown	42	34	47	23	20	26	34	43	47	44	64	39	463
	Sub Total	42	34	47	23	20	26	34	43	47	44	64	39	463
	Total	1023	739	761	719	1149	1062	1224	1207	1133	1035	888	612	11552

TABLE 8

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, Serotype and Month for 1989-2003

		Month												
Species	Serotype	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<i>S. boydii</i>	<i>boydii</i> 1	7	4	12	10	16	11	23	21	30	25	11	16	186
	<i>boydii</i> 2	36	29	44	47	49	58	76	102	81	69	49	31	671
	<i>boydii</i> 3	1	2		2	4	4			2				15
	<i>boydii</i> 4	16	12	11	12	11	13	28	36	33	16	22	10	220
	<i>boydii</i> 5	2	1		3	4	5	2	2	3	4	6		32
	<i>boydii</i> 6	1	1				2	3	3	2	4			16
	<i>boydii</i> 7		1		1				1		1			4
	<i>boydii</i> 8		2	1	1	1	1		6	1			2	15
	<i>boydii</i> 9	1		1							2			4
	<i>boydii</i> 10	2	3	3	6	6	9	13	18	11	12	7	11	101
	<i>boydii</i> 11	1		2	1	1		3	1	2		1	1	13
	<i>boydii</i> 12	2	2	3		1	2	2	7	2	3			24
	<i>boydii</i> 13	1									1	1	1	4
	<i>boydii</i> 14	5	2	3	9	12	7	22	20	10	16	10	3	119
	<i>boydii</i> 15				1	4		1	2	1				9
	<i>boydii</i> 17						1							1
	<i>boydii</i> 18	1	1		2	3			2		2	2	3	16
	<i>boydii</i> 19	2		1		1			1	1	1			7
	<i>boydii</i> 20	1												1
	<i>boydii</i> unspecified	101	115	94	73	128	176	201	280	269	272	179	137	2025
	Sub Total	180	175	175	168	241	289	374	502	448	428	288	215	3483
<i>S. dysenteriae</i>	<i>dysenteriae</i> 1	9	5	2	9	6	5	10	17	8	12	1	9	93
	<i>dysenteriae</i> 2	9	26	25	18	12	15	33	33	22	20	12	7	232
	<i>dysenteriae</i> 3	4	3	8	8	14	9	15	25	14	7	11	7	125
	<i>dysenteriae</i> 4	2	4	3	1	2	3	2	7	3	1	2	1	31
	<i>dysenteriae</i> 5									2				2
	<i>dysenteriae</i> 6							2				1		3
	<i>dysenteriae</i> 7		1			1			1					3
	<i>dysenteriae</i> 8							1	1	1		1		4
	<i>dysenteriae</i> 9		5	2	3	7	1	2	2	3	2	2	2	31
	<i>dysenteriae</i> 10							1		2		1		4
	<i>dysenteriae</i> 11					1	1	1	1		1			5
	<i>dysenteriae</i> 12							1	1		1			3
	<i>dysenteriae</i> 13							1		1				2
	<i>dysenteriae</i> 14										1			1
	<i>dysenteriae</i> unspecified	70	50	75	59	53	57	79	114	132	87	84	65	925
	Sub Total	94	94	115	98	96	91	148	202	188	132	115	91	1464
<i>S. flexneri</i>	<i>flexneri</i> 1 unspecified	279	235	269	265	302	318	390	428	403	426	252	244	3811
	<i>flexneri</i> 1a	16	14	22	11	16	6	16	21	23	12	10	9	176
	<i>flexneri</i> 1b	55	49	55	41	45	89	45	88	79	44	47	36	673
	<i>flexneri</i> 2 unspecified	421	337	347	379	445	386	497	630	429	418	357	344	4990
	<i>flexneri</i> 2a	130	113	101	125	111	147	156	181	138	138	95	102	1537
	<i>flexneri</i> 2b	26	16	30	19	13	22	35	34	19	26	15	11	266
	<i>flexneri</i> 3 unspecified	180	157	152	186	168	145	260	208	241	197	168	159	2221
	<i>flexneri</i> 3a	38	45	45	31	39	40	60	73	49	52	38	35	545
	<i>flexneri</i> 3b	14	12	26	17	14	16	15	17	11	17	14	14	187

TABLE 8

*Laboratory confirmed Shigella isolates reported to the CDC by Species, Serotype and Month for 1989-2003*

Species	Serotype	Month												Total
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	<i>flexneri</i> 4 unspecified	127	93	131	125	119	125	162	171	165	133	107	104	1562
	<i>flexneri</i> 4a	34	32	30	42	31	39	43	30	32	45	32	30	420
	<i>flexneri</i> 4b	5			2	6	5	4	3	3	1	4	2	35
	<i>flexneri</i> 4c											1		1
	<i>flexneri</i> 5 unspecified	35	22	28	21	34	49	50	43	47	35	36	25	425
	<i>flexneri</i> 5a						1							1
	<i>flexneri</i> 6	72	67	75	101	77	99	183	195	175	131	99	92	1366
	<i>flexneri</i> unspecified	1481	1488	1597	1529	1544	1613	1925	2164	2421	2128	1973	1839	21702
	<i>flexneri</i> variant x		2	1	1	2	1	3	5	3	2	4	2	26
	<i>flexneri</i> variant y	11	3	12	6	5	10	4	9	8	4	12	4	88
	<i>flexneri</i> 88-893 (Provisional)	1	1			1		2						5
	Sub Total	2925	2686	2921	2901	2972	3111	3850	4300	4246	3809	3264	3052	40037
<i>S. sonnei</i>	<i>sonnei</i>	9642	8085	9205	8666	11377	13314	15447	19100	17802	17712	15201	13175	158726
	Sub Total	9642	8085	9205	8666	11377	13314	15447	19100	17802	17712	15201	13175	158726
Unknown	Unknown	881	921	907	1012	1226	1303	1483	1763	1930	1727	1508	1560	16221
	Sub Total	881	921	907	1012	1226	1303	1483	1763	1930	1727	1508	1560	16221
	Total	13722	11961	13323	12845	15912	18108	21302	25867	24614	23808	20376	18093	219931

TABLE 9

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, Geographic Region and Year for 1989-2003

Species	Region	Year														Total	
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
All <i>Shigella</i>	New England	546	646	1757	555	520	414	586	373	486	366	851	385	288	325	338	8436
	Mid Atlantic	1310	1595	1263	1071	1215	1562	1758	2240	1874	1739	750	1726	967	1214	1678	21962
	East North Central	2673	2096	1643	2154	2816	1970	2105	1190	1457	1580	1853	2096	1897	1461	1462	28453
	West North Central	1359	630	403	589	828	1368	1391	699	494	623	806	2064	1332	633	467	13686
	South Atlantic	2568	1894	1565	1727	2860	4790	2181	1912	1136	1275	534	1171	1331	3624	2145	30713
	East South Central	738	1056	1108	866	1817	1732	1242	576	576	1230	699	587	647	652	720	14246
	West South Central	1152	1575	1216	892	1894	1062	1504	983	1388	1469	1212	1169	795	1017	1104	18432
	Mountain	1161	1655	2248	1174	1348	1436	2713	1665	1238	764	776	874	776	935	1042	19805
	Pacific	4465	6159	5302	5895	6213	4449	5850	4433	3665	3439	2606	3428	2566	3132	2596	64198
	Total	15972	17306	16505	14923	19511	18783	19330	14071	12314	12485	10087	13500	10599	12993	11552	219931
<i>S. boydii</i>	New England	16	17	12	4		5	11	6	14	6	8	7	5	6	10	127
	Mid Atlantic	17	10	10	6	11	15	12	5	13	10	12	16	15	11	11	174
	East North Central	42	29	20	16	30	19	31	19	23	25	23	12	12	11	15	327
	West North Central	5	5	7	3		7	6	3	4	4	6	7	7	6	2	72
	South Atlantic	10	8	8	5	10	27	7	10	7	9	9	14	12	7	4	147
	East South Central	2	2		1	4	1		2	1	2		1	2		1	19
	West South Central	36	34	44	11	29	23	27	19	26	15	18	12	5	2	1	302
	Mountain	48	47	30	14	14	18	32	91	41	22	23	38	28	18	22	486
	Pacific	290	246	181	164	123	92	103	120	124	115	59	73	40	40	59	1829
	Total	466	398	312	224	221	207	229	275	253	208	158	180	126	101	125	3483
<i>S. dysenteriae</i>	New England	9	8	6	6			3	6	6	10	3	2	3	4	4	70
	Mid Atlantic	9	9	6	8	2	6	6	6	8	7	2	11	7	6	8	101
	East North Central	23	15	11	21	4	6	11	8	2	9	9	4		7	7	137
	West North Central	7	3	1	6	1	2	1	2	2	1	2		3	2	1	34
	South Atlantic	2	5	6	4	4	5	2	8	5	6	2	4	8		1	62
	East South Central	1	2		1	4	3			3	1					1	16
	West South Central	14	14	10	2	6	8	5	7	5	9	1	3	1			85
	Mountain	25	7	12	5	12	9	6	18	12	16	7	5	3	5	5	147
	Pacific	126	118	93	73	72	55	56	48	36	28	23	28	23	19	14	812
	Total	216	181	145	126	105	94	90	103	79	87	49	57	48	43	41	1464
<i>S. flexneri</i>	New England	150	122	94	107	92	106	115	94	123	102	99	74	88	79	95	1540
	Mid Atlantic	269	254	227	177	211	213	206	179	188	247	176	154	194	106	104	2905
	East North Central	439	465	339	330	287	238	289	267	185	191	223	179	145	153	192	3922
	West North Central	168	125	115	77	67	121	71	105	82	79	95	70	70	77	59	1381
	South Atlantic	101	156	124	137	173	343	196	122	120	136	127	135	164	160	158	2352
	East South Central	15	18	20	16	18	31	28	21	40	18	16	21	26	32	34	354
	West South Central	327	359	268	156	122	128	167	99	164	137	174	121	71	50	43	2386
	Mountain	472	381	491	371	382	353	464	441	484	352	338	313	256	234	287	5619
	Pacific	1741	2151	2034	1879	1709	1568	1483	1376	1187	945	777	754	654	632	688	19578
	Total	3682	4031	3712	3250	3061	3101	3019	2704	2573	2207	2025	1821	1668	1523	1660	40037
<i>S. sonnei</i>	New England	358	448	1573	435	428	302	456	264	341	248	739	299	185	230	227	6533
	Mid Atlantic	1015	1321	1020	880	985	1325	1527	2048	1664	1470	547	1536	744	1090	1555	18727
	East North Central	2061	1443	1176	1671	2440	1707	1773	896	1242	1354	1592	1896	1726	1288	1245	23510
	West North Central	1084	446	255	478	698	1166	1281	575	405	538	696	1971	1216	534	403	11746
	South Atlantic	2268	1535	1210	1451	2280	2695	1966	1772	999	1121	396	1003	1141	3454	1976	25267
	East South Central	567	761	768	699	1369	1341	929	460	532	1209	681	534	608	606	600	11664
	West South Central	774	1167	891	721	1737	903	1303	857	1193	1292	986	948	705	964	1058	15499

TABLE 9

*Laboratory confirmed Shigella isolates reported to the CDC by Species, Geographic Region and Year for 1989-2003*

Species	Region	Year														Total	
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
	Mountain	522	1124	1601	722	824	920	2180	1115	695	374	408	511	408	647	711	12762
	Pacific	1593	2871	2240	3049	3578	2087	3396	2275	1736	1781	1321	2105	1460	2038	1488	33018
	Total	10242	11116	10734	10106	14339	12446	14811	10262	8807	9387	7366	10803	8193	10851	9263	158726
Unknown	New England	13	51	72	3		1	1	3	2		2	3	7	6	2	166
	Mid Atlantic		1			6	3	7	2	1	5	13	9	7	1		55
	East North Central	108	144	97	116	55		1		5	1	6	5	14	2	3	557
	West North Central	95	51	25	25	62	72	32	14	1	1	7	16	36	14	2	453
	South Atlantic	187	190	217	130	393	1720	10		5	3		15	6	3	6	2885
	East South Central	153	273	320	149	422	356	285	93			2	31	11	14	84	2193
	West South Central	1	1	3	2			2	1		16	33	85	13	1	2	160
	Mountain	94	96	114	62	116	136	31		6			7	81	31	17	791
	Pacific	715	773	754	730	731	647	812	614	582	570	426	468	389	403	347	8961
	Total	1366	1580	1602	1217	1785	2935	1181	727	602	596	489	639	564	475	463	16221

TABLE 10

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, State and Year for 1989-2003

Species	State	Year													Total		
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
All <i>Shigella</i>	Alabama	332	514	450	160	341	479	383	110	193	220	63	79	152	352	183	4011
	Alaska	14	7	30	19	21	14	10	59	3	7	5	3	7	1	6	206
	Arizona	291	498	577	399	369	401	815	695	694	348	413	350	302	439	364	6955
	Arkansas	43	20	91	18	100	61	96	100	60	67	27	63	154		79	979
	California	4132	5703	4473	5217	5175	3757	5347	3879	3222	3033	2358	2865	2149	2742	2253	56305
	Colorado	411	385	216	364	614	529	485	484	199	164	164	221	254	209	327	5026
	Connecticut	233	192	108	131	212	146	148	121	81	66	70	70	60	107	71	1816
	Delaware	60	109	4	7	60	11	125	66	21	38	11	23	16	446	158	1155
	District of Columbia	12	59	45	63	26	19	199	200	8							631
	Florida	500	199	378	263	248	721	319	275	245	539	154	107	44	154	9	4155
	Georgia	518	620	532	560	494	2062	176	173	244	252	83	194	465	895	636	7904
	Hawaii	69	60	80	119	89	193	102	86	55	51	36	33	61	61	42	1137
	Idaho	1	2		13	16	30	74	54	39	15	12	25	15	15	31	342
	Illinois	883	932	759	910	1142	1030	1215	525	842	1308	1018	941	374	771	876	13526
	Indiana	306	350	334	209	173	181	103	71	30	43	118	157	66	38	43	2222
	Iowa	82	47	30	42	45	323	240	115	72	46	62	350	291	67	57	1869
	Kansas	82	62	56	83	110	57	106	32	80	62	57	147	42	62	101	1139
	Kentucky	16	11	204	28	45	83	86	45	40	45	149	121	336	79	70	1358
	Louisiana	325	214	120	87	303	314	378	344	114	288	137	200	238	546	399	4007
	Maine	9	5	4	9	2	4		6					11	3	1	61
	Maryland	151	147	50	276	262	201	226	447	176	69	58	115	104	918	463	3663
	Massachusetts	244	341	1387	240	256	209	288	169	299	260	731	262	190	184	221	5281
	Michigan	772	342	193	494	645	329	454	341	249	5	489	610	232	174	217	5546
	Minnesota	426	122	80	90	236	467	166	164	141	334	254	926	500	226	106	4238
	Mississippi	134	274	261	117	382	461	333	179		7	11	7	32	32	19	2249
	Missouri	213	170	139	273	336	292	609	272	161	136	353	466	215	226	186	4047
	Montana	97	46	136	120	12	2	203	28	5	3	3	6	1	1	2	665
	Nebraska	1	5	1	6	1	2	4	4	17	19	68	117				245
	Nevada	27	8	2	6	3	2	19	13	13	20	6	66	50	47	44	326
	New Hampshire	27	63	40	6	10	10	79	26	21	22	17	8	4	14	13	360
	New Jersey	216	202	226	220	274	388	675	342	480	652	236	440	227	364	208	5150
	New Mexico	254	462	303	164	272	235	408	177	192	177	109	119	87	185	209	3353
	New York	423	770	361	451	453	697	548	305	790	828	331	840	511	487	616	8411
	North Carolina	932	555	228	307	1089	1130	593	186	173	183	93	271	186	527	334	6787
	North Dakota	193	143	25	13	13	59	126	58	3	3	2	52	41	7	6	744
	Ohio	403	212	97	77	585	276	260	221	307	153	150	332	1197	429	241	4940
	Oklahoma	93	187	130	97	214	85	132	157	134	213	171	45	75	376	626	2735
	Oregon	51	101	350	144	108	87	113	125	173	156	91	113	113	102	104	1931
	Pennsylvania	671	623	676	400	488	477	535	1593	604	259	183	446	229	363	854	8401
	Rhode Island	28	30	214	163	32	43	65	43	83	13	29	34	25	18	22	842
	South Carolina	112	110	38	68	113	180	115	78	30	99	64	94	124	81	290	1596
	South Dakota	362	81	72	82	87	168	140	54	20	23	10	6	243	45	11	1404
	Tennessee	256	257	193	561	1049	709	440	242	343	958	476	380	127	189	448	6628
	Texas	691	1154	875	690	1277	602	898	382	1080	901	877	861	328	95		10711
	Utah	80	254	1014	108	54	235	705	212	95	36	68	84	62	37	60	3104
	Vermont	5	15	4	6	8	2	6	8	2	5	4		6	1	4	76
	Virginia	260	74	257	165	530	466	401	456	226	87	66	350	382	594	251	4565

TABLE 10

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, State and Year for 1989-2003

Species	State	Year														Total	
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
	Washington	199	288	369	396	820	398	278	284	212	192	116	414	236	226	191	4619
	West Virginia	23	21	33	18	38		27	31	13	8	5	17	10	9	4	257
	Wisconsin	309	260	260	464	271	154	73	32	29	71	78	56	28	49	85	2219
	Wyoming					8	2	4	2	1	1	1	3	5	2	5	34
	Total	15972	17306	16505	14923	19511	18783	19330	14071	12314	12485	10087	13500	10599	12993	11552	219931
<i>S. boydii</i>	Alabama	1															1
	Alaska		2			1											3
	Arizona	30	35	17	6	5	5	22	73	26	9	13	20	11	14	10	296
	California	274	232	171	151	105	81	91	102	105	103	54	65	31	38	55	1658
	Colorado	11	5	4	3	3	3	5	6	10	5	3	8	1	1	3	71
	Connecticut	1	1	2	2		3	3	1	1	3		1				18
	Delaware					1	1							1			3
	District of Columbia	1		1				2									4
	Florida	1	1	2					1	1	1						7
	Georgia	1	2	2	1	2	19		1	1		4	6	3	2		44
	Hawaii	1			1			1	1		2			2			8
	Idaho										1		1	4	1	3	10
	Illinois	27	15	9	9	26	10	18	15	16	22	16	7	5	3	6	204
	Indiana	2	2	3			2	1			1	1	1		1	1	15
	Iowa	1	1		1		1		1				4	4	2		15
	Kansas		2	2			1	1		1	1		1		2		11
	Kentucky				1				2							1	4
	Louisiana			1		2		1	1	1		2		2			10
	Maine		1											1			2
	Maryland		1	2	2	4	3		2	2	2	1	2	2	1		24
	Massachusetts	11	14	10	2			6	4	10	3	7	6	4	4	9	90
	Michigan	5	5	3	2	3	2	7	1	4		3	3	3	5	4	50
	Minnesota	1	2	1	1		3	4	2	3	3	5	1	2	2	2	32
	Mississippi		1														1
	Missouri	2		3	1		2	1						1			10
	Montana		1							1					1		3
	Nebraska											1	1				2
	Nevada		1	1				1	4	1	2		1	1			12
	New Hampshire	1													1		2
	New Jersey	3	3	1		3	5	3	3	4	2	3	7	4		5	46
	New Mexico	5	4	7	4	6	6	3	3	1	4	2	5	6	1	6	63
	New York	11	6	4	6	6	7	7	2	8	8	9	8	7	10	4	103
	North Carolina			1			2	1	1	1	5	1	3		1	3	19
	Ohio	1	3	3		1	4	4	1		2	2		3	1	1	26
	Oklahoma	1	1			1	3	1			1	2	2		1	1	14
	Oregon	6	2	1	6	7	3	2	3	4	5	3	3	4	2	4	55
	Pennsylvania	3	1	5		2	3	2		1			1	4	1	2	25
	Rhode Island	2	1			2	1	1	3		1			1	1	1	13
	South Carolina				1	1						1	1	1			5
	South Dakota	1		1													2
	Tennessee	1	1			4	1			1	2		1	2			13
	Texas	35	33	43	11	26	20	25	18	25	14	14	10	3	1		278

TABLE 10

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, State and Year for 1989-2003

Species	State	Year														Total	
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
	Utah	2	1	1	1		3	1	5	2	1	5	3	5		30	
	Vermont	1						1								2	
	Virginia	7	3		1	2	2	4	5	2	1	2	2	5	2	1	39
	Washington	9	10	9	6	10	8	9	14	15	5	2	5	3		105	
	West Virginia		1											1		2	
	Wisconsin	7	4	2	5		1	1	2	3		1	1	1	1	3	32
	Wyoming						1									1	
	Total	466	398	312	224	221	207	229	275	253	208	158	180	126	101	125	3483
<i>S. dysenteriae</i>	Alabama		2		1	1				2							6
	Alaska	1				1											2
	Arizona	7	4	6	2	3	3	4	16	8	11	5	4	1	1	3	78
	Arkansas	1					1		1								3
	California	120	110	86	69	65	51	50	40	27	25	20	23	21	18	12	737
	Colorado	10	1	3	2	7	2	2	1	2	3	2			1	2	38
	Connecticut	4	2		2				1		5				1	2	17
	District of Columbia		1						2								3
	Florida		1	1	2	1			3		1		1	2			12
	Georgia	1		1		2	3		1	1	1	1		3			14
	Hawaii	1	2						1	1							5
	Idaho												1				1
	Illinois	14	8	4	18	2	3	10	4		7	5	1		3	2	81
	Indiana	2	1	2	2	1	1				2				3	1	15
	Kansas				3				1								4
	Kentucky						1				1						2
	Louisiana												1				1
	Maine		1														1
	Maryland	1		2	2					1			2	1		1	10
	Massachusetts	5	5	6	2			2	5	3	5	2	2	2	3	2	44
	Michigan	5	3	3		1	1	1	1	2		3	2			3	25
	Minnesota	3	2			1	2	1	1	2	1	2		3	1	1	20
	Missouri	3		1											1		5
	Montana	1			1												2
	Nebraska				1												1
	Nevada					1											1
	New Hampshire									1							1
	New Jersey	2		2	1	2	1		5	2	5	1	3	3		2	29
	New Mexico	4	1	2		1	2		1	2	2				2		17
	New York	3	6	4	5		4	4	1	3	2	1	7		3	4	47
	North Carolina		2	1					1	2	1	1					8
	North Dakota	1			2												3
	Ohio	1					1		1			1	1		1	1	7
	Oklahoma	2		2	1				1	1							7
	Oregon	2	1		1	1	2	1	2	4	2	1	1	1			19
	Pennsylvania	4	3		2		1	2		3			1	4	3	2	25
	Rhode Island				2					2		1		1			6
	South Dakota		1														1
	Tennessee	1				3	2			1					1		8

TABLE 10

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, State and Year for 1989-2003

Species	State	Year														Total	
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
	Texas	11	14	8	1	6	7	5	5	4	9	1	2	1		74	
	Utah	3	1	1			1						1	1	1		9
	Vermont							1									1
	Virginia		1	1		1	2	2	1	1	3		1	2			15
	Washington	2	5	7	3	5	2	5	5	4	1	2	4	1	1	2	49
	Wisconsin	1	3	2	1				2								9
	Wyoming						1										1
	Total	216	181	145	126	105	94	90	103	79	87	49	57	48	43	41	1464
<i>S. flexneri</i>	Alabama	3	6	3		2	11	5	7	7	5	5	8	8	7	10	87
	Alaska	8	2	4	2	6	4		6	1		4		3		4	44
	Arizona	181	150	259	225	212	197	263	279	287	202	192	158	140	112	134	2991
	Arkansas	3	1	1	2	1	2		2		4	2	4	2		7	31
	California	1577	1957	1831	1689	1478	1323	1269	1130	1000	767	631	610	477	511	548	16798
	Colorado	96	65	71	52	44	61	87	83	58	57	64	55	40	57	65	955
	Connecticut	21	17	13	26	13	25	18	15	23	15	20	15	21	17	18	277
	Delaware		1	1	1	1	2	3		5	1	5	11	4	3	7	45
	District of Columbia	4	19	24	18	13	15	28	10	4							135
	Florida	4	9	4	8	9	5	12	10	11	8	10	7	9	8		114
	Georgia	29	31	27	32	44	198	41	30	26	43	47	53	51	57	61	770
	Hawaii	42	36	57	72	63	68	57	67	31	25	25	17	39	32	33	664
	Idaho		1		3	7	13	2	4	9	9	6	8	3	3	8	76
	Illinois	283	340	222	208	204	157	192	167	124	163	159	110	65	81	103	2578
	Indiana	29	21	24	8	12	17	17	14	8	11	13	15	11	11	12	223
	Iowa	18	8	8	7	5	11	9	13	15	6	9	10	6	11	4	140
	Kansas	9	12	13	7	6	9	5	9	4	12	11	7	7	5	9	125
	Kentucky	2	2	4		2	6	2		13	2		2	2	2	11	50
	Louisiana	21	19	16	8	13	10	12	14	11	15	5	5	3	27	26	205
	Maine	4		1	4		1		6				1			3	20
	Maryland	20	31	11	31	45	61	32	32	18	29	21	19	34	26	43	453
	Massachusetts	103	95	71	60	69	66	73	50	90	81	60	43	53	49	61	1024
	Michigan	53	50	45	82	51	39	59	54	34		37	30	42	43	41	660
	Minnesota	32	26	20	20	16	75	28	53	40	39	37	22	30	34	28	500
	Mississippi	4	2	1	2		1				2		1	4	6	3	26
	Missouri	21	26	18	8	7	10	8	11	11	11	14	18	17	23	11	214
	Montana	2	7	9	1	1	1	6	1		2		1			1	32
	Nebraska		5						1		1	15	10				32
	Nevada	6	4	1	2			5		6	8	6	14	17	9	9	87
	New Hampshire	9	2	2	3	3	2	3	3	2	2	7	3	1	5	5	52
	New Jersey	51	44	43	42	42	49	69	49	46	85	59	44	38	16	22	699
	New Mexico	145	124	110	75	89	52	78	65	74	53	48	38	29	35	52	1067
	New York	142	155	122	93	125	128	107	81	101	126	93	86	139	58	57	1613
	North Carolina	18	39	26	23	30	22	32	20	34	23	24	22	35	32	25	405
	North Dakota	16	5	1	3	5			1	1	1	1	1	4		5	44
	Ohio	24	21	10	9	6	5	9	16	7	13	10	21	20	13	24	208
	Oklahoma	9	10	11	9	4	5	14	8	4	3	6	4	6	8	10	111
	Oregon	27	39	31	19	47	32	37	61	54	60	51	38	56	25	42	619
	Pennsylvania	76	55	62	42	44	36	30	49	41	36	24	24	17	32	25	593

TABLE 10

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, State and Year for 1989-2003

Species	State	Year													Total		
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
	Rhode Island	12	3	7	13	5	12	19	18	8	4	10	12	9	7	5	144
	South Carolina	5	10	7	9	1	7	5	3	7	5	1	3	7	7	5	82
	South Dakota	72	43	55	32	28	16	21	17	11	9	8	2	6	4	2	326
	Tennessee	6	8	12	14	14	13	21	14	20	9	11	10	12	17	10	191
	Texas	294	329	240	137	104	111	141	75	149	115	161	108	60	15		2039
	Utah	42	30	41	13	24	29	23	8	50	21	21	38	27	16	18	401
	Vermont	1	5		1	2		2	2			2		4	1	3	23
	Virginia	19	15	24	15	28	33	43	15	15	27	19	19	22	26	16	336
	Washington	87	117	111	97	115	141	120	112	101	93	66	89	79	64	61	1453
	West Virginia	2	1		2			2				1	2	1	1	1	12
	Wisconsin	50	33	38	23	14	20	12	16	12	4	4	3	7	5	12	253
	Wyoming				5			1			1	1		2			10
	Total	3682	4031	3712	3250	3061	3101	3019	2704	2573	2207	2025	1821	1668	1523	1660	40037
<i>S. sonnei</i>	Alabama	262	365	361	111	200	356	281	103	184	215	58	71	144	345	173	3229
	Alaska	5	2	26	17	13	10	10	53	2	7	1	3	4	1	2	156
	Arizona	73	309	294	166	149	196	523	327	373	126	203	168	140	308	216	3571
	Arkansas	38	19	89	16	99	58	96	97	60	63	25	59	152		72	943
	California	1448	2632	1632	2580	2806	1657	3126	1993	1508	1568	1227	1700	1237	1779	1291	28184
	Colorado	236	255	112	245	444	329	365	394	129	99	95	151	144	129	243	3370
	Connecticut	207	172	93	101	199	117	127	104	57	43	48	53	38	87	50	1496
	Delaware	60	108	3	6	58	8	122	66	16	37	6	12	11	443	151	1107
	District of Columbia	7	39	20	45	12	4	166	188	4							485
	Florida	495	188	371	252	237	694	305	261	233	529	144	99	32	146	9	3995
	Georgia	313	399	293	404	68	149	131	141	213	205	31	123	407	835	571	4283
	Hawaii	24	22	23	46	26	125	44	17	23	24	11	16	20	29	9	459
	Idaho		1		10	9	17	72	50	30	5	6	16	6	10	20	252
	Illinois	559	567	524	674	910	860	995	339	702	1116	835	820	303	683	764	10651
	Indiana	202	224	238	168	160	161	85	57	22	29	104	141	52	23	27	1693
	Iowa	51	29	18	27	34	263	231	101	57	40	53	336	279	54	53	1626
	Kansas	73	48	41	73	104	47	100	22	75	49	46	139	35	55	92	999
	Kentucky	14	9	200	27	43	76	84	43	27	42	149	119	334	77	58	1302
	Louisiana	304	195	103	78	288	304	365	329	102	273	130	194	233	519	373	3790
	Maine	5	3	3	5	2	3						8		1	4	34
	Maryland	130	115	35	239	213	134	194	413	154	38	36	91	66	891	417	3166
	Massachusetts	125	227	1300	176	187	143	206	109	194	171	662	211	127	124	148	4110
	Michigan	706	284	142	408	590	287	387	285	209	5	445	575	185	125	169	4802
	Minnesota	314	56	42	54	166	385	133	105	95	290	204	887	455	181	73	3440
	Mississippi	43	139	26	14	98	217	146	86		5	11	6	28	26	16	861
	Missouri	187	144	117	264	329	280	599	260	150	125	339	448	197	199	175	3813
	Montana	66	14	122	118	11	1	196	27	4	1	3	5	1		1	570
	Nebraska	1		1	5	1	2	4	3	17	18	51	106				209
	Nevada	21	3		4	2	2	13	9	4	10		51	32	36	33	220
	New Hampshire	5	29	29	3	7	8	76	21	18	20	10	5	3	8	8	250
	New Jersey	160	155	180	177	222	331	599	285	428	558	171	385	181	348	179	4359
	New Mexico	100	333	184	85	176	175	327	108	111	118	59	76	52	144	151	2199
	New York	267	602	231	347	321	557	427	219	677	689	219	735	359	415	551	6616
	North Carolina	911	514	200	284	1059	1105	560	164	136	154	67	246	151	494	306	6351

TABLE 10

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, State and Year for 1989-2003

Species	State	Year														Total	
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
	North Dakota	176	135	20	5	5	37	95	47	2	2	1	51	13	4	1	594
	Ohio	377	187	84	68	575	266	246	203	295	137	135	308	1166	414	215	4676
	Oklahoma	81	176	116	87	209	77	116	147	129	208	163	39	69	366	613	2596
	Oregon	15	59	317	116	53	50	73	59	111	89	36	70	48	70	58	1224
	Pennsylvania	588	564	609	356	442	437	501	1544	559	223	157	416	204	327	825	7752
	Rhode Island	13	14	144	147	27	29	45	24	70	9	17	22	15	10	16	602
	South Carolina	107	100	31	58	111	172	110	75	23	94	62	90	115	74	285	1507
	South Dakota	282	34	16	50	59	152	119	37	9	14	2	4	237	41	9	1065
	Tennessee	248	248	181	547	1028	692	418	228	321	947	463	338	102	158	353	6272
	Texas	351	777	583	540	1141	464	726	284	902	748	668	656	251	79		8170
	Utah	26	209	889	94	30	200	680	199	43	14	42	42	29	20	42	2559
	Vermont	3	3	4	3	6	2	2	6	2	5	2		2		1	41
	Virginia	234	55	232	148	498	429	351	435	207	56	45	326	351	564	234	4165
	Washington	101	156	242	290	680	245	143	153	92	93	46	316	151	159	128	2995
	West Virginia	11	17	25	15	24		27	29	13	8	5	16	8	7	3	208
	Wisconsin	217	181	188	353	205	133	60	12	14	67	73	52	20	43	70	1688
	Wyoming					3		4	1	1	1		2	4		5	21
	Total	10242	11116	10734	10106	14339	12446	14811	10262	8807	9387	7366	10803	8193	10851	9263	158726
Unknown	Alabama	66	141	86	48	138	112	97									688
	Alaska		1														1
	Arizona			1				3						10	4	1	19
	Arkansas	1		1													2
	California	713	772	753	728	721	645	811	614	582	570	426	467	383	396	347	8928
	Colorado	58	59	26	62	116	134	26					7	69	21	14	592
	Connecticut						1					2	1	1	2	1	8
	District of Columbia					1		3									4
	Florida				1	1	22	2						1			27
	Georgia	174	188	209	123	378	1693	4		3	3		12	1	1	4	2793
	Hawaii	1															1
	Idaho	1											1	1			3
	Illinois		2		1							3	3	1	1	1	12
	Indiana	71	102	67	31									3		2	276
	Iowa	12	9	4	7	6	48							2			88
	Louisiana					1											1
	Maine												2	2			4
	Maryland				2		3			1			1	1		2	10
	Massachusetts							1	1	2				4	4	1	13
	Michigan	3			2							1		2	1		9
	Minnesota	76	36	17	15	53	2		3	1	1	6	16	10	8	2	246
	Mississippi	87	132	234	101	284	243	187	93								1361
	Missouri							1	1					3		5	
	Montana	28	24	5				1									58
	Nebraska											1					1
	Nevada									2					2	2	6
	New Hampshire	12	32	9					2								55
	New Jersey					5	2	4		2	2	1	1				17
	New Mexico									4				3			7

TABLE 10

Laboratory confirmed *Shigella* isolates reported to the CDC by Species, State and Year for 1989-2003

Species	State	Year														Total	
		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
	New York		1			1	1	3	2	1	3	9	4	6	1	32	
	North Carolina	3					1									4	
	North Dakota		3	4	3	3	22	31	10					24	3	103	
	Ohio		1			3		1		5	1	2	2	8		23	
	Oklahoma			1				1	1		1				1	2	7
	Oregon	1		1	2								1	4	5		14
	Pennsylvania											2	4				6
	Rhode Island	1	12	63	1												77
	South Carolina						1							1			2
	South Dakota	7	3														10
	Tennessee						1	1				2	31	11	14	84	144
	Texas		1	1	1			1			15	33	85	13			150
	Utah	7	13	82			2	1									105
	Vermont		7		2												9
	Virginia				1	1		1		1		2	2	2			10
	Washington					10	2	1					2	2			17
	West Virginia	10	2	8	3	12											35
	Wisconsin	34	39	30	82	52											237
	Wyoming													1			1
	Total	1366	1580	1602	1217	1785	2935	1181	727	602	596	489	639	564	475	463	16221

**FIGURE 3**

Laboratory confirmed *S. sonnei* isolates reported to the CDC by Geographical Region and Year for 1989-2003

