

## **APPENDIX A**

### **Summary of Botulism Cases Reported in 2004**

A total of 138 cases of botulism intoxication were reported to CDC in 2004. Among the 14 cases of foodborne intoxication, toxin type A accounted for 12 (86%) cases and toxin type E for 2 (14%) cases. The median age of patients was 41 years. No deaths were reported. There were 2 multi-case outbreaks. They were caused by pruno, a bootleg prison-made alcoholic beverage, and home-canned mushrooms, respectively.

There were 91 reported cases of infant botulism. Toxin type B accounted for 54 (59%) cases, toxin type A for 36 (40%) cases, and toxin type F for 1(1%) case. The median age of patients was 15 weeks; one death was reported.

There were 28 reported cases of wound botulism. Toxin type A accounted for all but two cases. All occurred in injecting drug users. The median age of patients was 48 years; no deaths were reported.

There were 4 reported cases of treatment-related botulism resulting from a common-source outbreak through injection by the same person and from the same source. All 4 cases received cosmetic injections of a high-dose, unlicensed botulinum toxin A product not intended for human use. The case-patients were 34, 40, 52, and 53 years old.

There was 1 reported case of botulism of unknown source. Toxin type F accounted for this case, and the case patient was 26 years old. There were no reported cases of adult colonization botulism.

**Table 1. Summary of Reported Botulism Cases - 2004**

**Foodborne**

14 cases

Median age: 41 years (range: 19-68 years)  
Death: 0 confirmed, 1 case without information  
Gender: 8 (57%) male, 6 (43%) female  
Toxin type: 12 (86%) type A, 2 (14%) type E

2 multi-case outbreaks

**Infant**

91 cases

Median age: 15 weeks (range: 1 - 52 weeks)  
Death: 1 confirmed, 1 without information  
Gender: 52 (57%) male, 39 (43%) female  
Toxin type: 36 (40%) type A, 54 (59%) type B, 1 (1%) type F

**Wound**

28 cases

Median age: 48 years (range: 27 - 57 years)  
Death: 0 confirmed, 0 without information  
Gender: 24 (86%) male, 4 (14%) female  
Toxin type: 25 (89%) type A, 2 (7%) type B, 1 (4%) not typeable

**Treatment-Related**

4 cases constituting a single multi-case outbreak

Median Age: 45 years (range: 34-53 years)  
Death: No deaths reported  
Gender: 2 (50%) male, 2 (50%) female  
Toxin type: 4 (100%) type A

**Unknown Source**

1 case

Age: 26 years  
Death: No death reported  
Gender: male  
Toxin type: type F

**Table 2. Cases of Botulism by State and Type  
January 1 - December 31, 2004**

<u>State/District</u>	<u>Foodborne</u>	<u>Infant</u>	<u>Wound</u>	<u>Other</u>	<u>Total</u>
AK	1				1
AZ		1			1
CA	6	37	21		64
DC		1			1
DE		2			2
FL		1		4*	5
HI		1			1
IA		1			1
ID		1			1
KS		1			1
KY		1			1
MD		6			6
MN		1			1
MT	1	1			2
NE		1			1
NH		1			1
NJ	1	1			2
OH	1	2			3
OR	4	1	1		6
PA		15			15
SC		1			1
TN		1			1
TX		3	1		4
UT		2			2
VA		4			4
WA		2	5	1**	8
WV		2			2
<b>Total:</b>	<b>14</b>	<b>91</b>	<b>28</b>	<b>5</b>	<b>138</b>

\* Treatment-related source

\*\* Unknown source

**Table 3. Cases of Foodborne Botulism by Month (N=14)  
January 1 - December 31, 2004**

<u>Month</u>	<u>State</u>	<u>Age (years)</u>	<u>Gender</u>	<u>Toxin Type</u>	<u>Vehicle</u>	<u>Death</u>
January	OR	68	Female	A	multiple home-canned foods	Unknown
	OH	56	Female	A	home-canned tomatoes	No
April	AK	39	Female	E	seal meat/fat	No
May	NJ	41	Female	E	salted fermented fish	No
July	CA*	unknown	Male	A <sup>†</sup>	pruno <sup>††</sup>	No
	CA*	25	Male	A	pruno	No
	CA*	35	Male	A	pruno	No
	CA*	20	Male	A	pruno	No
	CA*	19	Male	A	pruno	No
	MT	47	Female	A	home-canned asparagus	No
August	CA	40	Male	A	unknown	No
September	OR	19	Male	A	stew	No
December	OR*	51	Male	A	home canned mushrooms	No
	OR*	57	Female	A	home canned mushrooms	No

\*Cases involved in multicase outbreak

†Toxin type derived from epidemiologically-linked case

†† Bootleg prison-made alcoholic beverage

**Table 4. Cases of Infant Botulism by Month (N=91)  
January 1 - December 31, 2004**

<u>Month</u>	<u>State</u>	<u>Age (weeks)</u>	<u>Gender</u>	<u>Toxin Type</u>	<u>Death</u>
January	CA	14	F	B	N
	CA	15	M	B	N
	PA	26	M	B	N
	WA	27	M	A	N
	PA	26	M	A	N
	CA	21	M	A	N
	UT	20	F	A	N
February	WV	8	F	B	N
	CA	22	M	A	N
	CA	14	M	B	N
	PA	18	F	B	N
	OH	6	F	B	N
	MN	20	M	B	N
	VA	4	F	B	N
March	TX	9	M	A	N
	WV	4	M	B	N
	CA	52	F	B	N
	MD	5	F	B	N
	PA	21	F	B	N
	CA	28	M	A	N
	PA	24	M	B	N
April	CA	4	F	A	N
	MT	38	M	A	N
	VA	3	F	B	N
	UT	18	M	A	N
	CA	22	M	B	N
	PA	23	F	B	N
	VA	14	M	B	N
May	CA	9	F	A	N
	CA	4	M	B	N
	PA	13	F	B	N
June	CA	6	F	A	N
	KY	14	F	B	N
	DE	19	F	B	N
	CA	4	M	B	N
	CA	3	M	B	N
	PA	3	M	B	N
	CA	31	M	A	N
	WA	6	M	B	N
	CA	9	M	B	N
	PA	1	F	B	N
July	CA	24	M	A	N
	CA	23	M	A	N
	ID	10	M	A	N
	CA	4	F	B	N
	CA	4	F	B	N
	AZ	22	M	B	N
	MD	21	M	B	N
	OR	7	M	B	U

**Table 4. Cases of Infant Botulism by Month (N=91)  
January 1 - December 31, 2004**

August	CA	15	F	A	N	
	SC	15	F	A	N	
	TX	24	F	A	N	
	CA	11	M	B	N	
	VA	10	F	A	N	
	NJ	10	F	B	N	
	MD	18	F	B	N	
	PA	27	F	B	N	
September	CA	16	M	A	N	
	CA	4	M	B	N	
	DE	4	F	B	N	
	PA	6	F	B	N	
	IA	2	M	F	Y**	
	PA	26	F	B	N	
	NH	2	M	B	N	
	MD	26	M	A	N	
	TN	14	F	B	N	
	OH	19	F	B	N	
	KS	4	M	B	N	
	October	CA	3	M	B	N
		MD	22	M	B	N
CA		16	F	A	N	
CA		22	M	A	N	
NE		15	F	A	N	
CA		5	F	A	N	
CA		20	M	A	N	
FL		18	M	A	N	
November	CA	14	F	A	N	
	CA	3	M	A	N	
	HI	13	F	B	N	
	TX	15	M	A	N	
	PA	20	M	B	N	
	PA	27	M	B	N	
	MD	13	M	B	N	
	CA	18	M	A	N	
December	CA	29	M	A	N	
	PA	25	M	B	N	
	CA	20	M	A	N	
	CA	7	F	A	N	
	DC	25	M	B	N	
	CA	26	M	B	N	
	CA	32	F	A	N	

\*\*Patient died from complications arising from *C. difficile* colitis.

**Table 5. Cases of Wound Botulism by Month (N=28)  
January 1 - December 31, 2004**

<u>Month</u>	<u>State</u>	<u>Age (years)</u>	<u>Gender</u>	<u>Toxin Type</u>	<u>Exposure*</u>	<u>Death</u>
March	CA	37	Male	A	IDU	No
	CA	54	Male	A	IDU	No
	CA	55	Male	B	IDU	No
	WA	51	Male	A	IDU	No
	WA	52	Male	A	IDU	No
June	CA	33	Male	A	IDU	No
	CA	34	Male	A	IDU	No
	CA	27	Male	A	IDU	No
July	CA	54	Male	unknown <sup>†</sup>	IDU	No
	CA	53	Male	A	IDU	No
	CA	53	Male	A	IDU	No
August	TX	49	Male	A	IDU	No
	CA	49	Male	A	IDU	No
	CA	55	Male	A	IDU	No
September	WA	49	Female	A	IDU	No
	CA	50	Male	A	IDU	No
October	CA	42	Male	A	IDU	No
	CA	47	Female	A	IDU	No
	CA	56	Male	A	IDU	No
	WA	50	Male	A	IDU	No
November	CA	52	Male	A	IDU	No
	CA	53	Male	A	IDU	No
	CA	57	Male	A	IDU	No
December	WA	43	Male	A	IDU	No
	CA	43	Male	A	IDU	No
	CA	49	Female	A	IDU	No
	CA	52	Male	A	IDU	No
	OR	50	Female	B	IDU	No

\* IDU = injection drug user

† Serum quantity not sufficient for toxin typing

**Table 6. Cases of Treatment-Related Botulism (N=4)  
January 1 - December 31, 2004**

<u>Month</u>	<u>State</u>	<u>Age (years)</u>	<u>Gender</u>	<u>Toxin Type</u>	<u>Death</u>
November	FL*	53	Female	A	No
November	FL*	52	Male	A	No
November	FL*	40	Male	A	No
November	FL*	34	Female	A	No

\*Cases involved in single common-source outbreak



**Table 7. Cases of Botulism of Unknown Source (N=1)  
January 1 - December 31, 2004**

<u>Month</u>	<u>State</u>	<u>Age (years)</u>	<u>Gender</u>	<u>Toxin Type</u>	<u>Death</u>
April	WA	26	Male	F	No