

National Enteric Disease Surveillance: Botulism Annual Summary, 2012

An overview of national botulism surveillance is available at:
http://www.cdc.gov/nceid/dfwed/PDFs/bot-overview_508c.pdf

Summary of Botulism Cases Reported in 2012

A total of 160 laboratory-confirmed cases of botulism were reported to CDC in 2012. Foodborne botulism accounted for 25 (16%), infant botulism for 122 (76%), wound botulism for 8 (5%), and botulism of unknown or other etiology for 5 (3%) cases (Table 1).

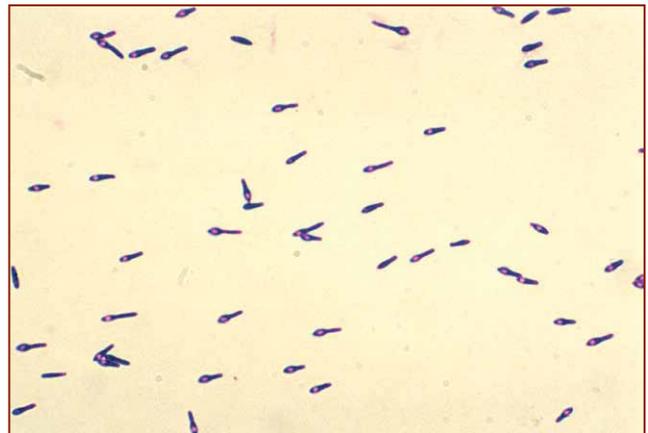
The 25 cases of foodborne intoxication were reported from eight states and New York City (Table 2). Of these, toxin type A accounted for 19 (76%), toxin type B for 3 (12%), and toxin type E for 3 (12%). The median age of patients was 33 years, with a range of 15–77 years; 22 (88%) were male. There were four outbreaks (events with two or more cases). Two were associated with pruno, an illicit alcoholic beverage brewed by prisoners (associated with 4 cases and 8 cases, both in Arizona), one with home-canned beets (3 cases in Oregon), and the other with home-canned pasta in meat sauce (2 cases in Michigan). One death was reported (Table 3).

The 122 cases of infant botulism were reported from 28 states, the District of Columbia, and New York City. Toxin type A accounted for 51 (42%), toxin type B for 66 (54%), toxin type Ba for 1 (<1%), toxin type Bf for 1 (<1%), and toxin type F for 3 (2%). The median age of patients was 19 weeks with a range of 1–53 weeks; 73 (60%) were male. No deaths were reported (Table 4).

The 8 cases of wound botulism were reported from three states (California [6 cases], Washington [1], and Kansas [1]). Toxin type A accounted for 7 (88%), and toxin type B for 1 (12%). All but two patients were injection drug users; one case was associated with a wound containing a splinter from a wooden broom stick and one was associated with an open fracture. The median age of patients was 47 years with a range of 14–59 years; 6 (75%) were male. No deaths were reported (Table 5).

The 5 cases of botulism of unknown or other etiology were reported from four states. Toxin type A accounted for 3 (60%), toxin type B for 1 (20%), and toxin type E or F* for 1 (20%). The median age of patients was 50 years with a range of 43–83 years; 4 (80%) were male. One death was reported (Table 6).

*Serum quantity not sufficient for toxin typing



A photomicrograph of *Clostridium botulinum* type A.

Table 1. Summary of reported botulism cases — United States, 2012

Foodborne (25 cases)	
Median age	33 years (range: 15–77 years)
Death	1 confirmed
Gender	22 (88%) male, 3 (12%) female
Toxin type	19 (76%) type A 3 (12%) type B 3 (12%) type E
Outbreaks*	4
Infant (122 cases)	
Median age	19 weeks (range: 1–53 weeks)
Death	0 confirmed
Gender	73 (60%) male, 49 (40%) female
Toxin type	51 (42%) type A 66 (54%) type B 1 (<1%) type Ba 1 (<1%) type Bf 3 (2%) type F
Outbreaks	None
Wound (8 cases)	
Median age	47 years (range: 14–59 years)
Death	0 confirmed
Gender	6 (75%) male, 2 (25%) female
Toxin type	7 (88%) type A 1 (12%) type B
Outbreaks	None
Unknown, Other (5 cases)	
Median age	50 years (range: 43–83 years)
Death	1 confirmed
Gender	4 (80%) male, 1 (20%) female
Toxin type	3 (60%) type A 1 (20%) type B 1 (20%) type E or F†
Outbreaks	None

* Outbreaks defined as two or more cases resulting from a common exposure

† Serum quantity not sufficient for toxin typing

Table 2. Cases of botulism by reporting jurisdiction and type (n=160), January 1–December 31, 2012

	Foodborne	Wound	Infant	Unknown, Other
Alaska	3			
Arkansas			1	
Arizona	12		2	
California	1	6	36	2
Colorado			1	
Connecticut			1	
District of Columbia			1	
Delaware	1			
Florida			1	
Idaho			2	
Illinois			1	
Kansas		1		
Kentucky			4	
Maryland			1	
Massachusetts			1	
Michigan	2		2	
Mississippi			2	
Missouri			1	
New Jersey	1		6	
New Mexico			2	
New York			4	1
New York City	1		3	
North Carolina			1	
Ohio	1		5	1
Oklahoma			1	
Oregon	3		3	
Pennsylvania			21	1
Tennessee			1	
Texas			1	
Utah			9	
Virginia			2	
Washington		1	4	
Wyoming			1	
Total	25	8	122	5

Table 3. Cases of foodborne botulism by month (n=25), January 1– December 31, 2012

Month	State or Jurisdiction	Age (years)	Gender	Toxin Type	Suspected or Confirmed Vehicle	Death
January	OH	62	Male	A	Home-canned green beans	No
March	NYC	39	Male	B	Home fermented tofu	No
April	NJ	27	Male	A	Home-canned soup*	Unknown
May	CA	48	Female	B	Home-canned tuna	No
June	MI [†]	65	Male	A	Home-canned pasta in meat sauce [†]	No
June	MI [†]	15	Female	A	Home-canned pasta in meat sauce [†]	No
June	OR [†]	57	Male	A	Home-canned beets [†]	Yes
June	OR [†]	65	Female	A	Home-canned beets [†]	No
June	OR [†]	66	Male	A	Home-canned beets [†]	No
July	AK	77	Male	E	Beaver tail*	No
July	AZ [†]	27	Male	A	Pruno ^{*†}	No
July	AZ [†]	33	Male	A	Pruno ^{*†}	No
July	AZ [†]	28	Male	A	Pruno ^{*†}	No
July	AZ [†]	33	Male	A	Pruno ^{*†}	No
August	DE	50	Male	B	Homemade garlic infused oil*	No
August	AK	43	Male	E	Stinkheads*	No
September	AK	36	Male	E	Seal oil and fat*	No
November	AZ [†]	24	Male	A	Pruno [†]	No
November	AZ [†]	28	Male	A	Pruno [†]	No
November	AZ [†]	20	Male	A	Pruno [†]	No
November	AZ [†]	25	Male	A	Pruno [†]	No
November	AZ [†]	25	Male	A	Pruno [†]	No
November	AZ [†]	35	Male	A	Pruno [†]	No
November	AZ [†]	25	Male	A	Pruno [†]	No
November	AZ [†]	33	Male	A	Pruno [†]	No

* Toxin not detected in food or food item not available for testing; food vehicle suspected based on epidemiologic evidence and known association with botulism

[†] Outbreak cases

Table 4. Cases of infant botulism by month (n=122), January 1– December 31, 2012

Month	State	Age (weeks)	Gender	Toxin Type	Death
January	NJ	19	Female	B	No
January	PA	10	Female	B	No
January	PA	11	Male	B	No
January	VA	1	Female	F	No
January	OH	18	Male	B	No
January	CA	19	Male	A	No
January	CA	34	Male	B	No
February	PA	23	Male	B	No
February	PA	23	Male	B	No
February	CA	26	Male	A	No
February	KY	28	Male	B	No
February	PA	19	Female	B	No
February	PA	5	Male	B	No
February	AZ	11	Female	B	No
February	OH	1	Female	F	No
February	CA	32	Male	A	No
February	NM	41	Female	A	No
March	CA	20	Female	A	No
March	CA	53	Male	B	No
March	KY	18	Female	B	No
March	CA	7	Male	A	No
March	NJ	25	Male	B	No
March	CA	38	Male	A	No
March	CA	31	Male	B	No
March	OH	27	Male	B	No
March	WA	19	Female	A	No
March	MA	1	Male	F	No
March	PA	17	Female	B	No
March	PA	27	Male	B	No
April	CA	13	Female	Ba	No
April	UT	47	Male	A	No
April	NJ	19	Male	B	No

Table 4. Cases of infant botulism by month (n=102), January 1– December 31, 2012 (continued)

Month	State	Age (weeks)	Gender	Toxin Type	Death
April	PA	11	Female	B	No
April	TX	7	Male	A	No
April	AR	31	Male	B	No
May	PA	18	Male	B	No
May	MI	25	Male	B	No
May	CA	27	Female	A	No
May	NY	28	Female	B	No
May	PA	47	Female	B	No
May	UT	17	Male	A	No
May	KY	22	Male	B	No
May	PA	8	Male	B	No
May	NYC	6	Female	A	No
May	TN	12	Male	B	No
May	PA	11	Male	B	No
May	CA	34	Female	A	No
May	PA	4	Male	B	No
May	CA	11	Female	A	No
May	PA	16	Female	B	No
May	KY	30	Female	B	No
June	CA	4	Male	A	No
June	NY	15	Male	B	No
June	WA	12	Male	A	No
June	CA	26	Female	A	No
June	PA	20	Male	B	No
June	MD	15	Female	B	No
June	CA	27	Male	Bf	No
June	NY	20	Male	B	No
June	NY	10	Female	A	No
June	CO	19	Male	B	No
June	CA	18	Female	B	No
June	UT	37	Female	A	No
June	CA	4	Male	B	No

Table 4. Cases of infant botulism by month (n=102), January 1– December 31, 2012 (continued)

Month	State	Age (weeks)	Gender	Toxin Type	Death
June	MS	4	Male	B	No
June	CA	13	Female	A	No
June	PA	18	Male	B	No
June	IL	9	Female	A	No
July	CA	20	Female	A	No
July	CA	4	Female	A	No
July	NC	4	Female	B	No
July	CA	17	Female	B	No
July	UT	4	Male	A	No
July	MS	3	Female	B	No
July	UT	19	Male	B	No
July	NJ	8	Male	B	No
July	CA	24	Male	A	No
August	CA	34	Male	B	No
August	NYC	19	Female	B	No
August	DC	29	Male	A	No
August	CA	19	Male	A	No
August	FL	3	Male	B	No
August	OR	6	Female	A	No
August	MI	22	Male	B	No
August	NJ	27	Male	B	No
August	CA	27	Male	A	No
August	OK	27	Male	A	No
August	CA	28	Male	A	No
August	CA	6	Female	B	No
August	OR	8	Female	A	No
September	OH	23	Male	B	No
September	ID	18	Male	A	No
September	OR	27	Female	A	No
September	VA	18	Female	A	No
September	NJ	23	Female	B	No
September	OH	19	Male	B	No

Table 4. Cases of infant botulism by month (n=102), January 1– December 31, 2012 (continued)

Month	State	Age (weeks)	Gender	Toxin Type	Death
October	CA	22	Male	A	No
October	NM	5	Female	A	No
October	CT	31	Male	B	No
October	WA	15	Female	A	No
October	CA	7	Male	A	No
October	UT	25	Male	A	No
October	WY	1	Female	A	No
October	CA	32	Male	A	No
November	CA	12	Female	A	No
November	PA	16	Male	B	No
November	ID	35	Female	A	No
November	UT	19	Male	B	No
November	WY	19	Male	A	No
November	MO	48	Male	B	No
November	CA	10	Male	B	No
November	CA	10	Female	A	No
December	CA	5	Male	B	No
December	UT	19	Male	A	No
December	AZ	8	Female	B	No
December	PA	21	Male	B	No
December	WA	25	Female	A	No
December	PA	25	Female	B	No
December	NYC	16	Female	B	No
December	UT	15	Male	A	No
December	CA	9	Male	A	No
December	PA	10	Male	B	No

Table 5. Cases of wound botulism by month (n=8), January 1– December 31, 2012

Month	State	Age (years)	Gender	Toxin Type	Exposure*	Death
March	CA	59	Female	A	IDU	No
July	CA	52	Male	A	IDU	No
July	CA	48	Male	A	IDU	No
September	CA	16	Male	B	Open fracture	No
September	CA	45	Male	A	IDU	No
September	CA	59	Male	A	IDU	No
October	KS	14	Male	A	Wound containing splinter from wooden broomstick	No
December	WA	24	Female	A [†]	IDU	No

* IDU = injection drug user

[†]Toxin type was inconclusive by mouse bioassay; type A toxin was identified by endopep-mass spectrometry at CDC

Table 6. Cases of unknown or other type of botulism by month (n=5), January 1– December 31, 2012

Month	State	Age (years)	Gender	Toxin Type	Exposure	Death
February	CA	67	Male	E/F*	Unknown	No
April	NY	43	Male	A	Unknown	No
April	OH	43	Female	A	Unknown	No
July	PA	50	Male	B	Unknown	No
December	CA	83	Male	A	Unknown	Yes

* Serum quantity not sufficient for toxin typing

References

- 2012 Case Definitions: Nationally Notifiable Conditions Infectious and Non-Infections Case. (2012). Atlanta, GA: Centers for Disease Control and Prevention. Available at: http://www.cdc.gov/nndss/document/2012_Case%20Definitions.pdf

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