

National Botulism Surveillance Summary 2015

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 2015

A total of 199 confirmed and 14 probable cases of botulism were reported to CDC in 2015. Among confirmed cases, infant botulism accounted for 141 (71%) cases, foodborne botulism for 39 (20%) cases, wound botulism for 15 (8%) cases, and botulism of unknown or other transmission category for 4 (2%) cases (Table 1). Among probable cases, foodborne botulism accounted for 6 (43%) cases and wound botulism for 8 (57%) cases.

The 141 cases of infant botulism were reported from 33 states and the District of Columbia. The median age of patients was 2.7 months with a range of 0–10 months; 70 (50%) were girls. Toxin type A accounted for 60 (43%), toxin type B accounted for 79 (56%), and toxin type Bf accounted for 2 (1%). No deaths were reported.

The 39 cases of confirmed foodborne botulism were reported from 7 states (Figure 1). The median age of patients was 59 years with a range of 9–92 years; 25 (64%) were women. There were 5 outbreaks (events with two or more cases) accounting for 37 confirmed cases. One outbreak was associated with home-canned potatoes in a potato salad served at a church potluck (27 cases),[†] one was associated with fermented seal flipper (4 cases), and one was associated with beets roasted in aluminum foil and kept at room temperature for several days then made into a soup (2 cases). In addition, there were two outbreaks of two cases each living in the same household or facility in which the foodborne source was unknown (Table 2a). Toxin type A accounted for 34 (87%), and toxin type E accounted for 5 (13%). One death was reported.

The 6 cases of probable foodborne botulism (clinically compatible illness, not laboratory-confirmed, with an epidemiologic link to a suspect food) were reported from 3 states. The median age of patients was 53 years with a range of 23–73 years; 3 (50%) were women. No deaths were reported. Seal oil was the suspected food source for 2 of the 6 probable cases (Table 2b).

There were 15 cases of confirmed wound botulism reported from 5 states. The median age of patients was 49 years with a range of 12–61 years; 2 (13%) were women. Toxin type A accounted for 14 (93%), and toxin type B accounted for 1 (7%). Fourteen (93%) were people who inject drugs (PWID). One death was reported.

The 8 cases of probable wound botulism (clinically compatible case who has no suspected exposure to contaminated food and who has a history in the 2 weeks before illness began of either a fresh wound or injection drug use) were reported from 3 states. The median age of patients was 59 years with a range of 28–78 years; 1 (12%) was a woman. All 8 were PWID. No deaths were reported.

The 4 confirmed botulism cases of unknown etiology were reported from 3 states. The median age of patients was 47 years with a range of 27–71 years; 1 (25%) was a woman. Toxin type A accounted for all 4. No definitive route of transmission was identified for these cases. Two cases were suspected to be adult intestinal colonization, a rare form of botulism thought to have a similar mechanism as infant botulism. The other two cases did not consume a suspect food, have any wounds, or have any known risk factors for adult intestinal colonization. How these persons were exposed to botulinum toxin is unknown. One patient developed botulism in 2015 and died in 2016 during a prolonged hospitalization.

[†] The Morbidity and Mortality Weekly Report (MMWR; <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6429a6.htm>) regarding this outbreak reported 29 cases based on an outbreak definition, and here we report 27 cases based on the 2011 CSTE case definition (<https://www.cdc.gov/nndss/conditions/botulism/case-definition/2011/>).

Table 1. Summary of reported botulism cases by transmission category and case status—United States, 2015

	Cases	Median Age	Deaths	Sex	Toxin type	Exposures	Outbreaks*
Infant	141	2.7 months (range: 0–10 months)	0	71 (50%) male, 70 (50%) female	60 (43%) type A, 79 (56%) type B, 2 (1%) type Bf	—	0
Foodborne, Confirmed	39	64 years (range: 9–92 years)	1	14 (36%) male, 25 (64%) female	34 (87%) type A, 5 (13%) type E	(See Table 2a)	5
Foodborne, Probable[§]	6	53 years (range: 23–73 years)	0	3 (50%) male, 3 (50%) female	—	(See Table 2b)	1
Wound, Confirmed	15	49 years (range: 12–61 years)	1	13 (87%) male, 2 (13%) female	14 (93%) type A, 1 (7%) type B	14 (93%) PWID	0
Wound, Probable[§]	8	59 years (range: 28–78 years)	0	7 (88%) male, 1 (12%) female	—	8 (100%) PWID	0
Unknown/ Other	4	47 years (range: 27–91 years)	1	3 (75%) male, 1 (25%) female	4 (100%) type A	—	0

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

§ Probable foodborne botulism is defined as a clinically compatible case with an epidemiologic link (e.g., ingestion of a home-canned food within the previous 48 hours). Probable wound botulism is defined as a clinically compatible case who has no suspected exposure to contaminated food and who has a history in the 2 weeks before illness began of either a fresh wound or injection drug use.

Table 2a. Foods linked to confirmed botulism cases (n=39), 2015

Month	State	Confirmed or Suspected Food	Toxin Type	Number of Cases
January	NC	Home-canned carrots*	A	1
Jan/Feb	IL	Unknown	A	2
April	OH	Potato salad*/Macaroni*	A	27
April	NM	Unknown	A	2
May	AK	Fermented seal flipper*	E	4
July	UT	Beet soup*	A	2
July	AK	Seal oil	E	1

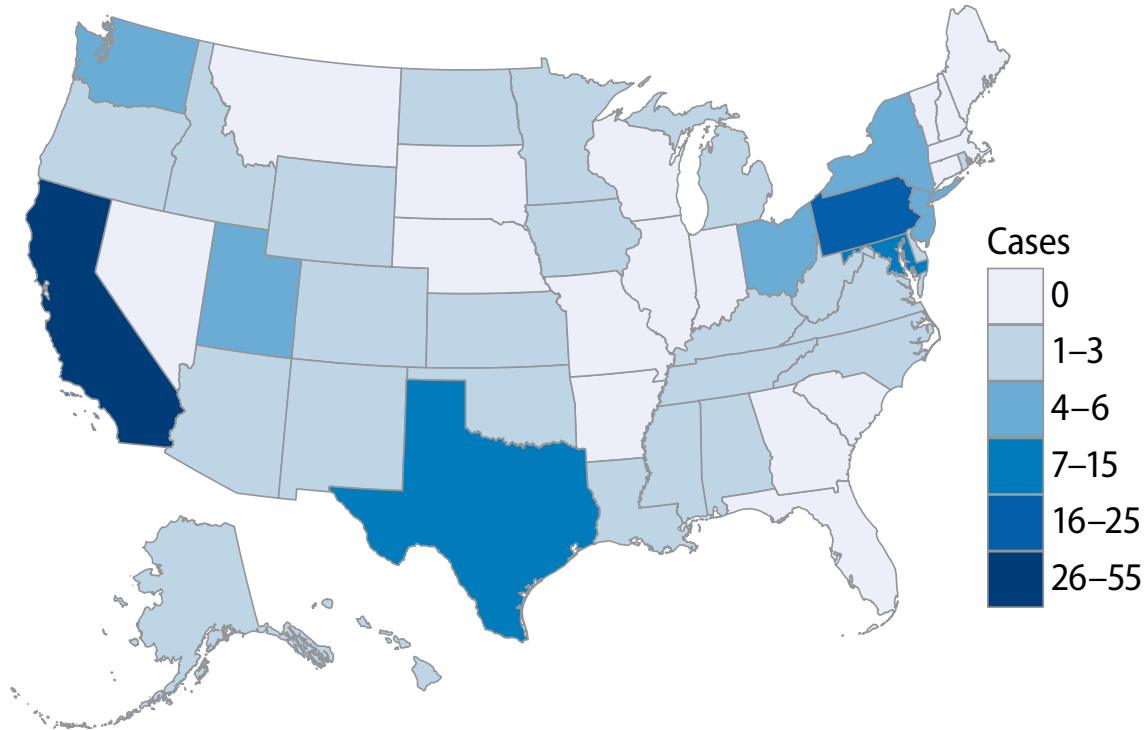
* Toxin detected in food

Table 2b. Foods linked to probable botulism cases (n=6), 2015

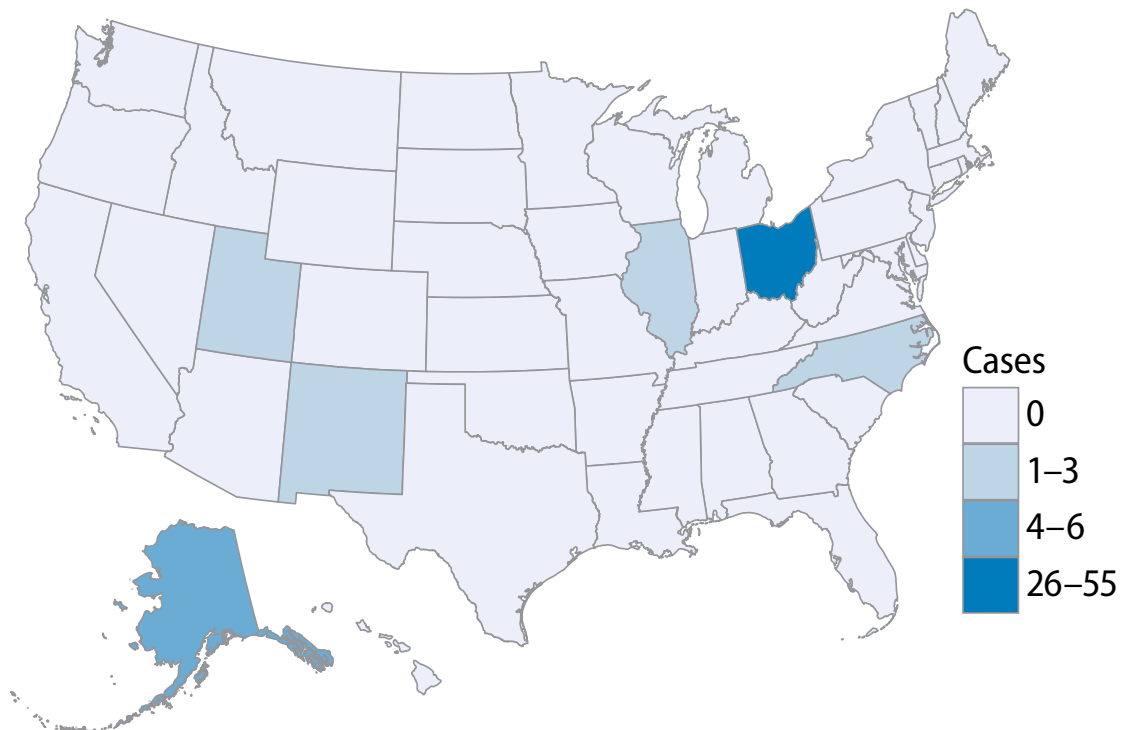
Month	State	Suspected Food	Number of Cases
January	AK	Seal oil or fermented trout	1
February	AK	Seal oil	1
April	IL	Unknown	2
April	OH	Potluck	2

Figure 1. Number of confirmed botulism cases by state and transmission category—United States, 2015

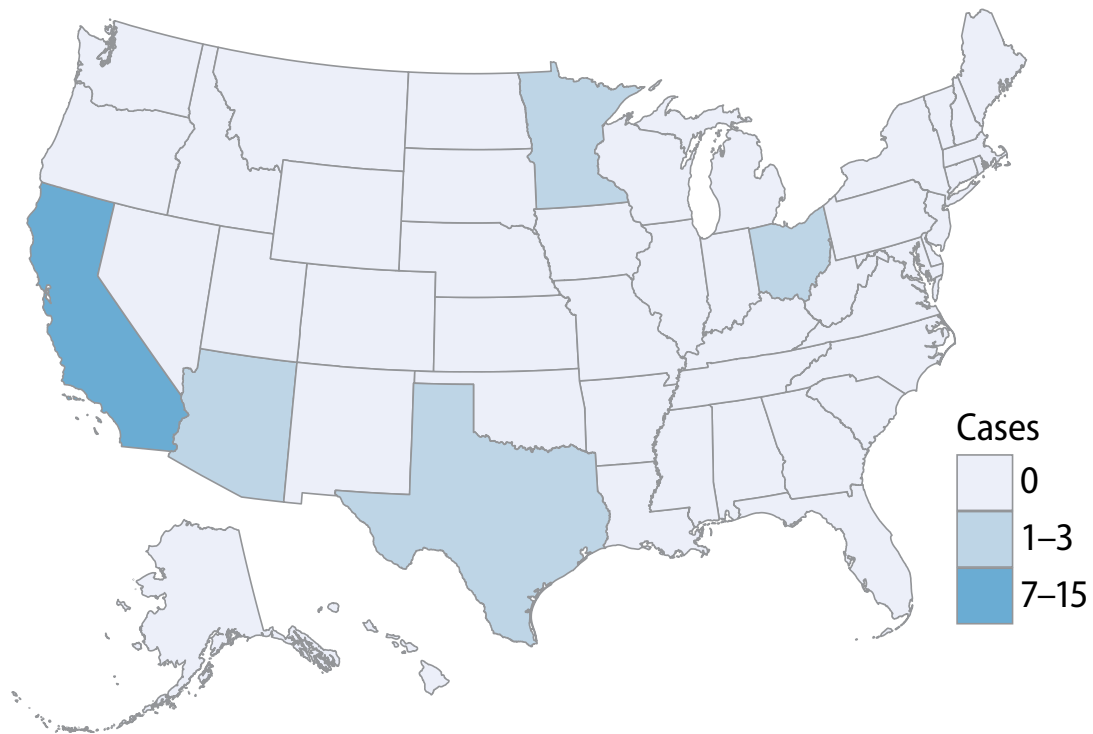
Infant (n=141)



Foodborne (n=39)



Wound (n=15)



Other (n=4)

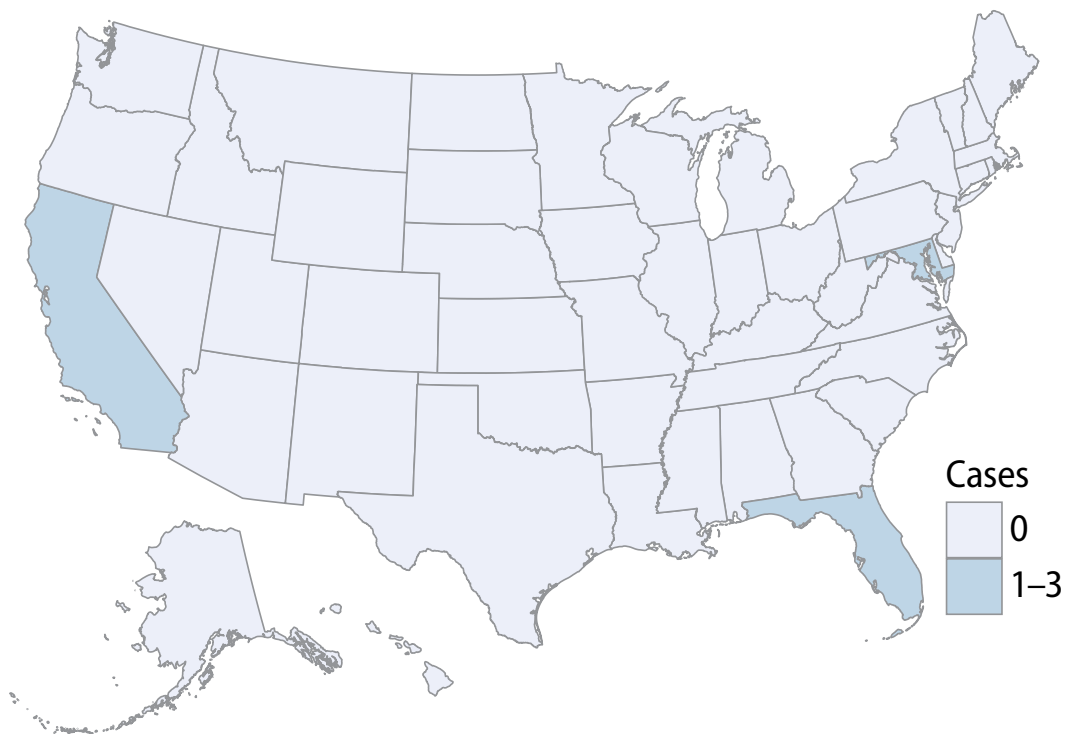
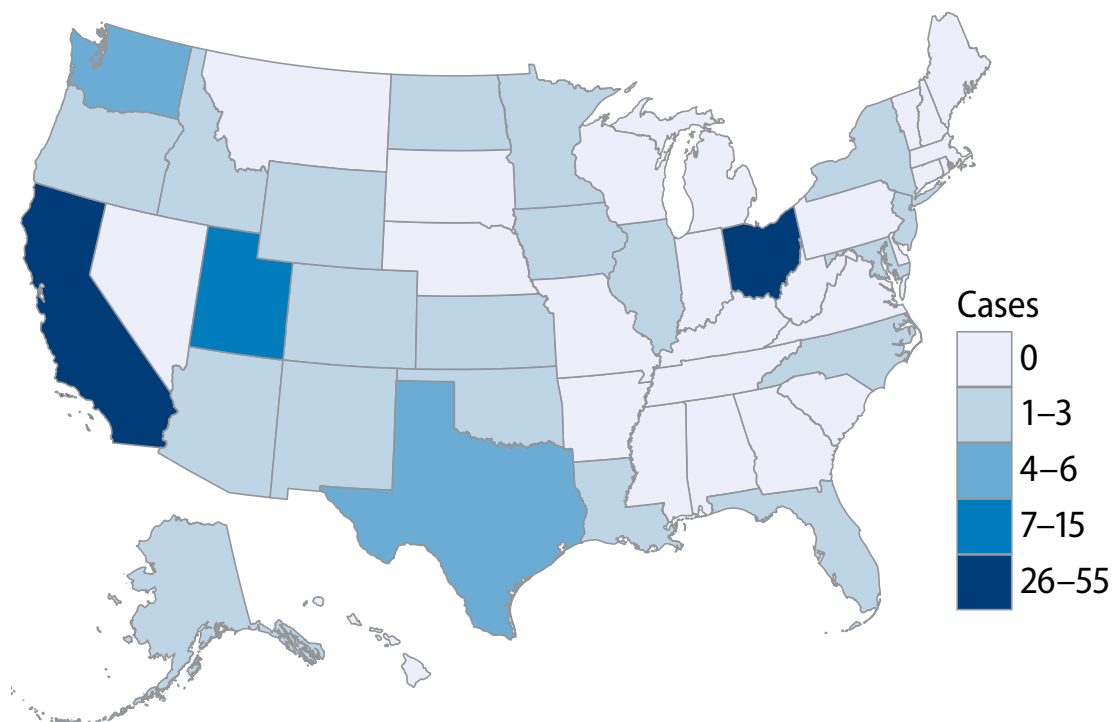
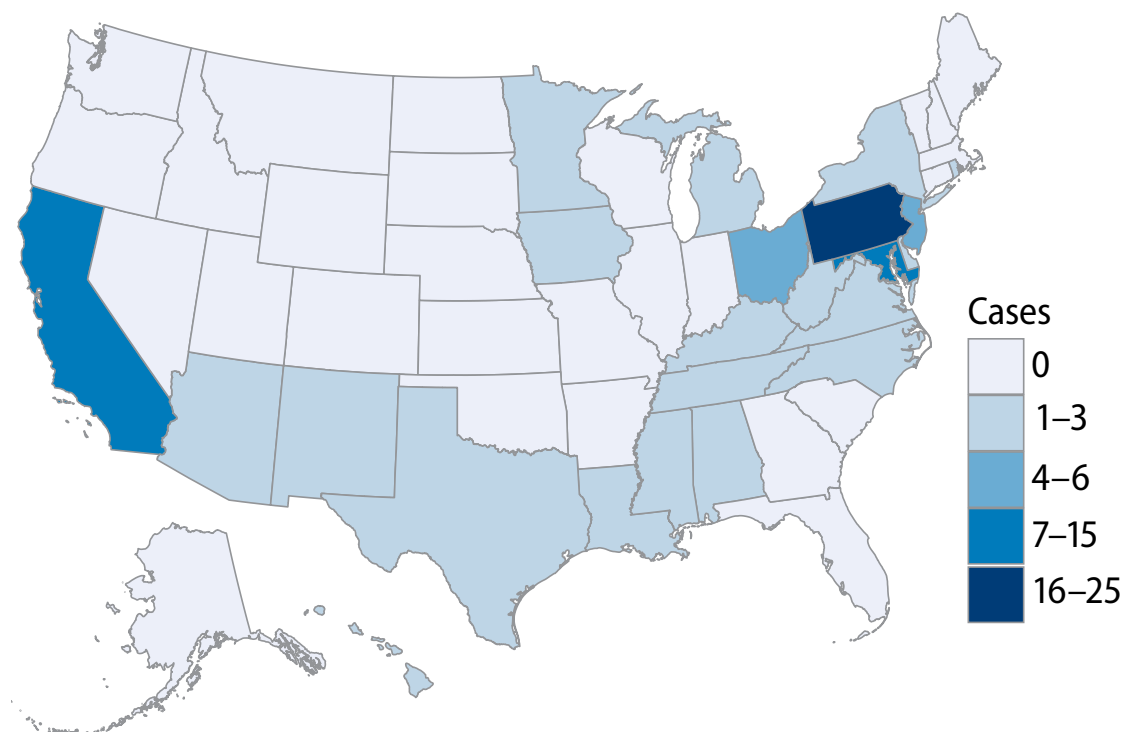


Figure 2. Number of confirmed botulism cases by state and toxin type—United States, 2015

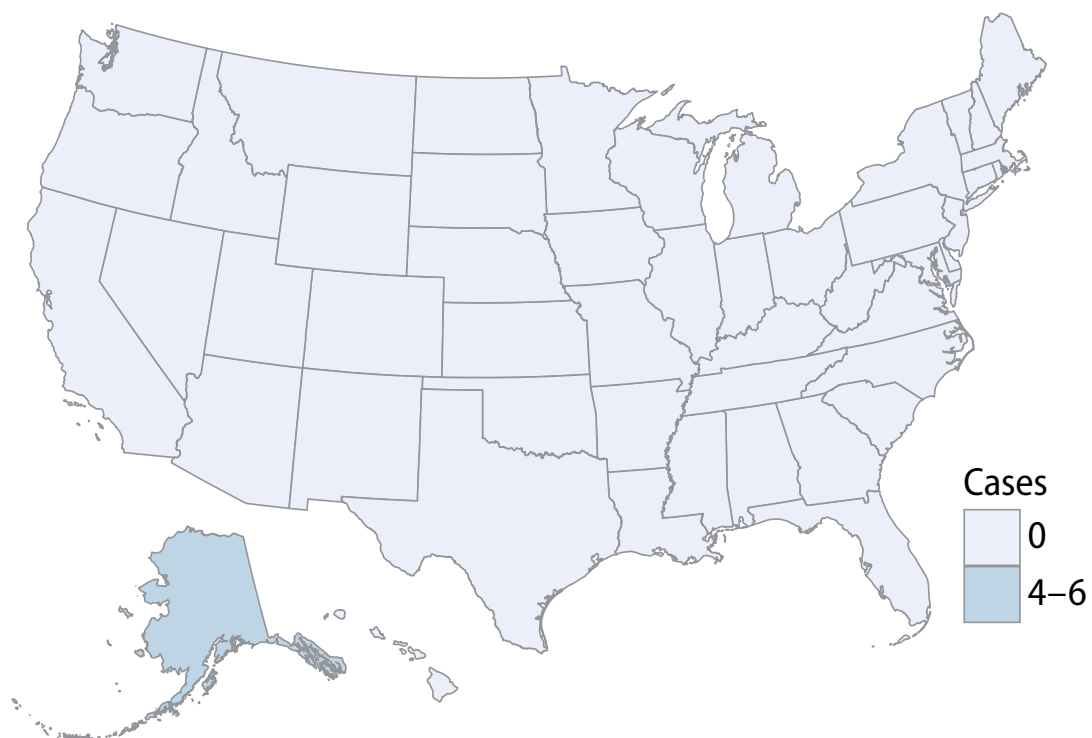
Toxin type A (n=112)



Toxin type B (n=80)



Toxin type E (n=5)



Toxin type Bf (n=2)

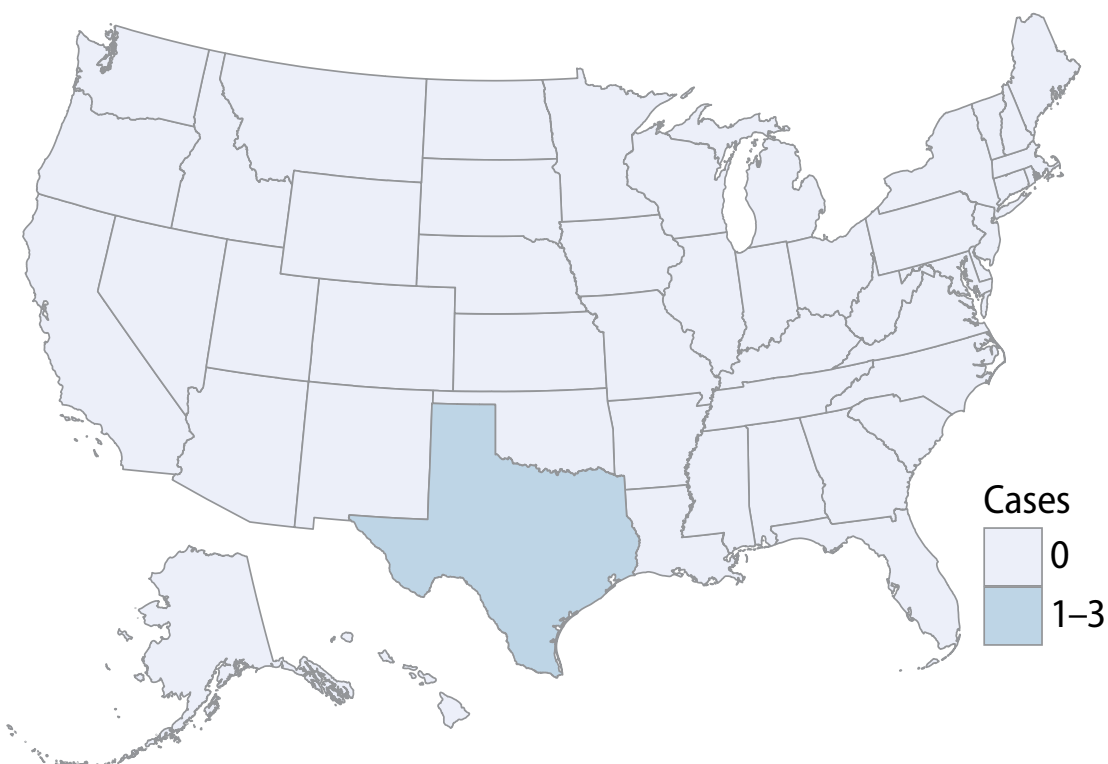
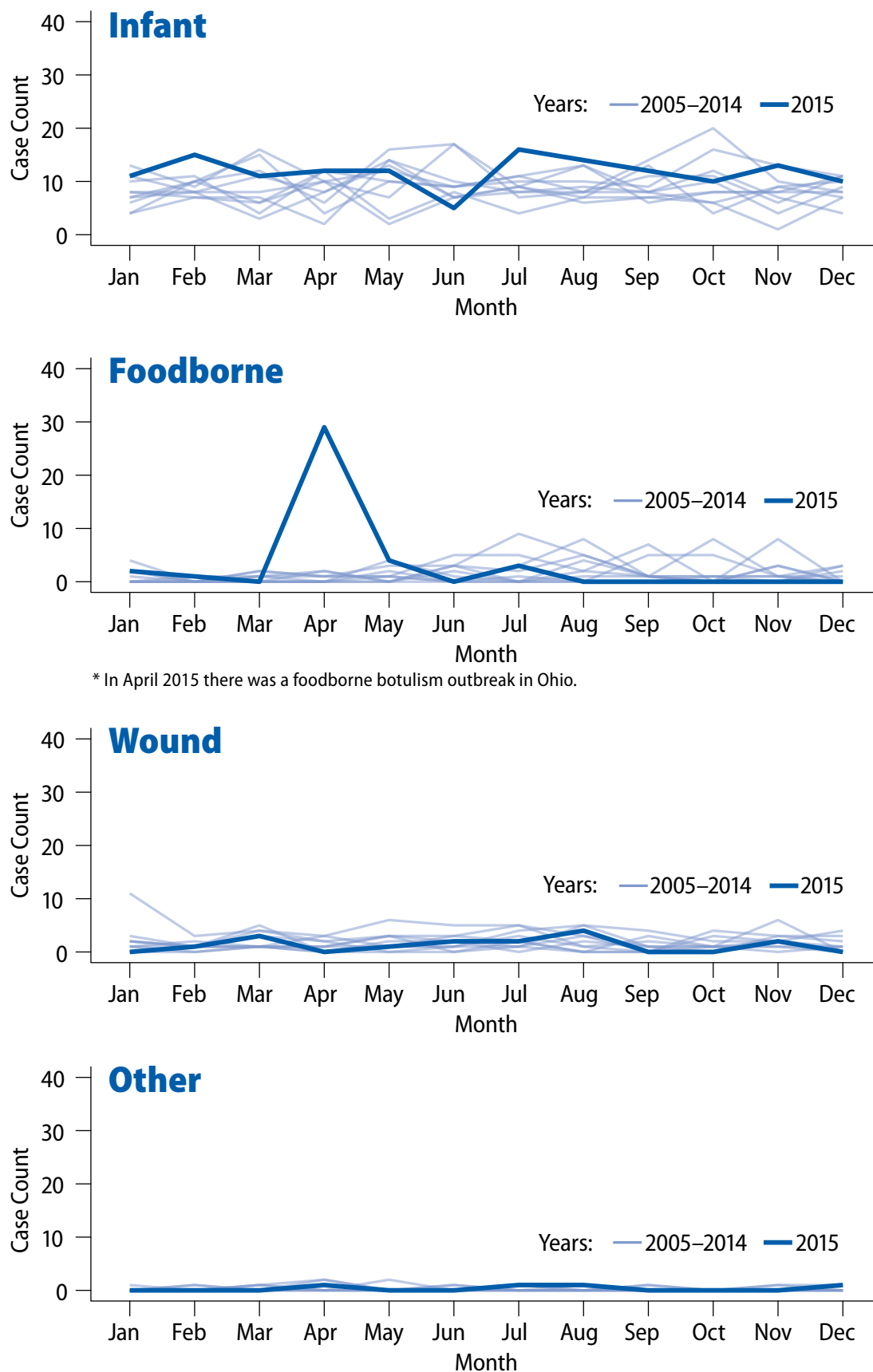


Figure 3. Confirmed botulism cases by month of onset and transmission category—United States, 2005–2015



References

[1] 2012 Case Definitions: Nationally Notifiable Conditions Infectious and Non-Infections Case. (2012). Atlanta, GA: Centers for Disease Control and Prevention. Available at:

<https://wwwn.cdc.gov/nndss/conditions/botulism/case-definition/2011/>

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NCEZID Atlanta—For more information please contact:

Centers for Disease Control and Prevention, 1600 Clifton Road NE, Atlanta, GA 30333 MS C-09

Telephone: 1-404-639-2206

wEmail: cdcinfo@cdc.gov